HIGHLIGHTS

REVISION NO. 33 Jun 01/10

Pages which have been revised are outlined below, together with the Highlights of the Revision

CH/SE/SU C PAGES	REASON FOR CHANGE	EFFECTIVITY
CHAPTER 56		
L.E.P. 1- 2	Revised to Reflect this revision indicating new,revised, and/or deleted pages	
T. OF C. 1	Revised to reflect this revision	
56-11-11 601- 602, 610- 612	Minor additions and amplification **ADDED TEXT 'HEATING FILM CRACKING'.** Reprinted	
56-11-11 801- 802, 805	Minor additions and amplification **ADDED SEALANTS PR1784B1/2, PR1425B AND ADHESION PROMOTER PR186.** Reprinted	

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CHAPTER 56

WINDOWS

LIST OF EFFECTIVE PAGES

N, R or D indicates pages which are New, Revised or Deleted respectively
Remove and insert the affected pages and complete the Record of Revisions and the Record of Temporary Revisions as necessary

CH/SE/SU	C	PAGE	DATE
RECORD			
OF TEMP.			
REVISION			
L.E.P.	R	1- 2	Jun01/10
T. of C.	R	1	Jun01/10
T. of C.		2	Jun01/07
56-00-00		1	Jun01/92
56-00-00		2	Dec01/90
56-00-00		3	Jun01/09
56-10-00		1	Dec01/90
56-10-00		601	Jun01/01
56-10-00		602	Jun01/01
56-10-00		901	Jun01/07
56-10-00		902	Jun01/08
56-11-00		1	Dec01/90
56-11-00		2	Dec01/90
56-11-00		3	Dec01/90
56-11-11		401	Jun01/08
56-11-11		402	Jun01/08
56-11-11		403	Jun01/08
56-11-11		404	Jun01/05
56-11-11		405	Jun01/05
56-11-11		406	Jun01/05
56-11-11		407	Jun01/05
56-11-11		408	Jun01/05
56-11-11		409	Jun01/05
56-11-11		410	Jun01/08
56-11-11		411	Jun01/05
56-11-11		412	Jun01/05
56-11-11		413	Jun01/08
56-11-11		414	Jun01/08
56-11-11		415	Jun01/08
56-11-11		416	Jun01/08
56-11-11		417	Jun01/08
56-11-11		418	Jun01/08
56-11-11		419	Jun01/08
56-11-11		420	Jun01/07
56-11-11		421	Jun01/08
56-11-11		422	Jun01/08
56-11-11		423	Jun01/08
56-11-11	R	601	Jun01/10
56-11-11	R	602	Jun01/10
56-11-11		603	Jun01/01
56-11-11		604	Jun01/09
56-11-11		605	Jun01/01
56-11-11		606	Jun01/01
56-11-11		607	Jun01/01
56-11-11		608	Jun01/01
56-11-11		609	Jun01/01
56-11-11	R	610	Jun01/10
56-11-11	R	611	Jun01/10
56-11-11	N	612	Jun01/10
56-11-11		701	Jun01/09
56-11-11		702	Jun01/09
56-11-11	R	801	Jun01/10
56-11-11	R	802	Jun01/10
56-11-11		803	Jun01/01
56-11-11		804	Jun01/01
56-11-11	R	805	Jun01/10
56-11-12		401	Jun01/06
56-11-12		402	Dec01/90
56-11-12		403	Jun01/06
56-11-12		601	Jun01/07
56-11-12		602	Jun01/07
56-11-12		603	Jun01/09
56-11-12		604	Jun01/07
56-11-12		605	Jun01/07
56-11-12		606	Jun01/07
56-11-12		607	Jun01/07
56-11-12		608	Jun01/07
56-11-12		609	Jun01/07
56-11-12		610	Jun01/01
56-11-12		611	Jun01/04
56-11-12		612	Jun01/07
56-11-12		613	Jun01/00
56-11-12		801	Jun01/00
56-11-12		802	Jun01/00
56-11-12		803	Jun01/00
56-11-12		804	Jun01/00
56-11-12		805	Jun01/00
56-12-00		1	Jun01/00
56-12-00		2	Dec01/90
56-12-00		3	Jun01/00
56-12-00		4	Dec01/90
56-12-00		401	Jun01/98
56-12-00		402	Jun01/98
56-12-00		403	Dec01/90
56-12-00		404	Jun01/92
56-12-00		405	Jun01/92
56-12-00		406	Jun01/92
56-12-00		407	Jun01/01
56-12-00		408	Dec01/93
56-12-00		409	Jun01/01
56-12-00		410	Jun01/01
56-12-11		401	Jun01/98
56-12-11		402	Dec01/90
56-12-11		403	Jun01/95
56-12-11		404	Jun01/95
56-12-11		405	Jun01/98
56-12-11		406	Jun01/98
56-12-11		407	Jun01/98
56-12-11		408	Jun01/95
56-12-11		409	Jun01/95
56-12-11		601	Dec01/06
56-12-11		602	Jun01/95
56-12-11		603	Jun01/09
56-12-11		604	Dec01/94
56-12-11		605	Dec01/99
56-12-11		606	Dec01/94
56-12-11		607	Dec01/99
56-12-11		608	Dec01/99
56-12-11		609	Jun01/01
56-12-11		610	Jun01/01
56-12-11		611	Dec01/96
56-12-11		612	Jun01/01
56-12-11		613	Jun01/00
56-12-11		801	Jun01/05
56-12-11		802	Jun01/05
56-12-11		803	Jun01/05
56-12-11		804	Jun01/05
56-12-11		805	Jun01/00
56-12-12		401	Jun01/00

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CH/SE/SU	C	PAGE	DATE
56-12-12		402	Jun01/00
56-12-12		403	Jun01/00
56-12-13		401	Jun01/07
56-12-13		402	Jun01/07
56-12-13		403	Jun01/07
56-12-13		601	Jun01/02
56-21-00		1	Jun01/09
56-21-00		2	Dec01/90
56-21-00		3	Dec01/90
56-21-00		4	Sep01/91
56-21-00		301	Dec01/90
56-21-11		401	Dec01/98
56-21-11		402	Dec01/90
56-21-11		403	Dec01/90
56-21-11		404	Dec01/90
56-21-11		405	Dec01/98
56-21-11		406	Jun01/04
56-21-11		407	Dec01/90
56-21-11		408	Jun01/04
56-21-11		601	Jun01/09
56-21-11		602	Jun01/09
56-21-11		603	Dec01/90
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56-21-11		606	Jun01/09
56-21-11		607	Jun01/09
56-21-11		608	Jun01/09
56-21-11		701	Dec01/90
56-21-11		702	Dec01/90
56-21-12		401	Jun01/04
56-21-12		402	Sep01/91
56-21-12		403	Sep01/91
56-21-12		404	Jun01/04
56-21-12		405	Dec01/90
56-21-12		406	Jun01/04
56-21-12		601	Dec01/92
56-21-12		602	Sep01/91
56-21-12		603	Dec01/90
56-31-00		1	Jun01/09
56-31-00		2	Dec01/90
56-31-14		401	Jun01/08
56-31-14		402	Jun01/08
56-31-14		403	Dec01/90
56-31-14		404	Dec01/90
56-31-14		405	Jun01/08
56-31-14		406	Dec01/90
56-31-14		407	Jun01/08
56-31-14		601	Dec01/90
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56-31-14		607	Dec01/90
56-31-14		608	Dec01/90
56-31-14		701	Dec01/90
56-31-14		702	Dec01/90
56-41-00		1	Dec01/90
56-41-00		2	Dec01/90
56-41-11		401	Dec01/90
56-41-11		402	Dec01/90
56-41-11		403	Dec01/90

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CHAPTER 56

WINDOWS

TABLE OF CONTENTS

	SUBJECT	CH/SE/SU	C	PAGE	EFFECTIVITY
	WINDOWS	56-00-00			
	Description and Operation			1	ALL
	FLIGHT COMPARTMENT	56-10-00			
	Description and Operation			1	ALL
	General			1	ALL
	Description			1	ALL
	Inspection/Check			601	ALL
	Measurement of Scratch Depth with MITUTOYO Surface Tester SJ201			601	ALL
	Deactivation/Reactivation			901	ALL
	Reason for the Job			901	ALL
	Ref. MMEL Sect. 1-56 item 1			901	ALL
	FIXED WINDOWS	56-11-00			
	Description and Operation			1	ALL
	Windshield Panel Assembly			1	ALL
	Fixed Side Window Panel Assembly			1	ALL
	WINDSHIELD PANELS	56-11-11			
	Removal/Installation			401	ALL
	Inspection/Check			601	ALL
	Cleaning			701	ALL
R	Approved Repairs			801	ALL
	FIXED SIDE WINDOW PANELS	56-11-12			
	Removal/Installation			401	ALL
	Inspection/Check			601	ALL
	Approved Repair			801	ALL
	SLIDING WINDOWS	56-12-00			
	Description and Operation			1	ALL
	Panels			1	ALL
	Operating Mechanism			1	ALL
	Operation			3	ALL
	Removal/Installation			401	ALL
	SLIDING SIDE WINDOW PANELS	56-12-11			
	Removal and Installation			401	ALL
	Inspection/Check			601	ALL
	Approved repair			801	ALL
	ACTUATING MECHANISM - SLIDING SIDE WINDOW	56-12-12			
	Removal/Installation			401	ALL
	SLIDING WINDOW PREFORMED SEAL	56-12-13			
	Removal/Installation			401	ALL
	Inspection/Check			601	ALL
	CABIN	56-20-00			

SUBJECT	CH/SE/SU	C	PAGE	EFFECTIVITY
PASSENGER COMPARTMENT WINDOWS	56-21-00			
Description and Operation			1	ALL
Special Precautions			301	ALL
PASSENGER COMPARTMENT WINDOW ASSEMBLY	56-21-11			
Removal/Installation			401	ALL
Inspection/Check			601	ALL
Possible Types of Damage			601	ALL
Inspection Method			602	ALL
Inspection of Windowpanes			602	ALL
Cleaning			701	ALL
PASSENGER COMPARTMENT DUMMY WINDOW ASSEMBLY	56-21-12			
Removal/Installation			401	ALL
Inspection/Check			601	ALL
DOOR	56-30-00			
PASSENGER/CREW DOOR WINDOW	56-31-00			
Description and Operation			1	ALL
PASSENGER/CREW DOOR WINDOW	56-31-14			
Removal/Installation			401	ALL
Inspection/Check			601	ALL
Possible Types of Damage			601	ALL
Inspection Method			602	ALL
Inspection of Windowpanes			602	ALL
Cleaning			701	ALL
INSPECTION AND OBSERVATION	56-40-00			
VIEWING WINDOWS	56-41-00			
Description and Operation			1	ALL
NOSE LANDING GEAR VIEWING WINDOW	56-41-11			
Removal/Installation			401	ALL
Viewing Window			401	ALL
Mechanical Indicator Lighting Window			401	ALL

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WINDOWS - DESCRIPTION AND OPERATION

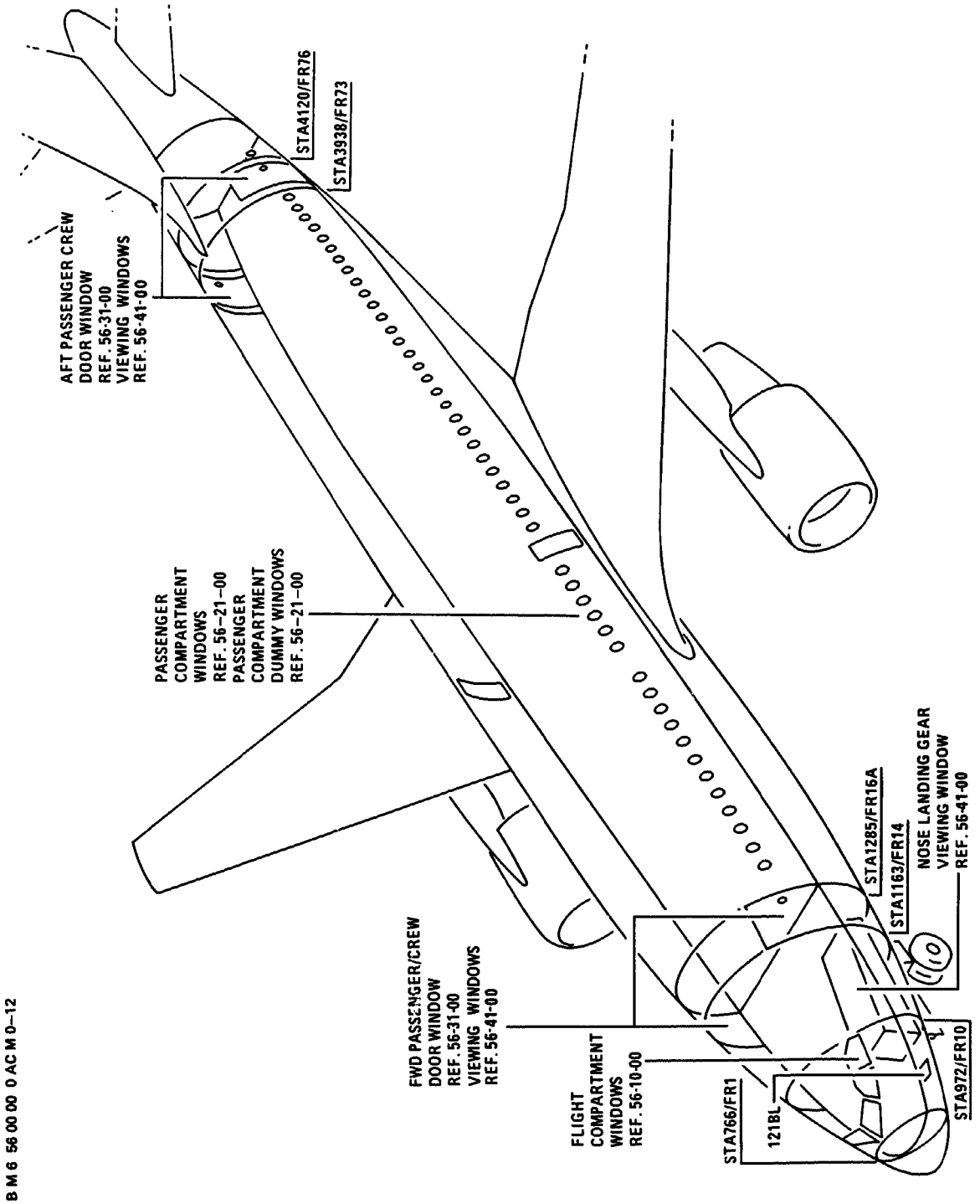
1. General

A. There are various types of windows installed throughout the aircraft.
- Windshield, fixed and sliding windows. The sliding windows can be used as crew emergency exits.
- Passenger compartment windows.
- Passenger/crew door window.
- Nose landing gear viewing window and mechanical indicator lighting window. The windows allow the nose landing gear downlock to be visually checked.
- Emergency operation cylinder viewing window. The window allows the contents of the cylinder to be read without opening the passenger/crew door.

2. Component Location

(Ref. Fig. 001)

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
	WINDOWS - FLIGHT COMPARTMENT		211 212		56-10-00
	WINDOWS - PASSENGER COMPARTMENT		200		56-21-00
	WINDOWS - DUMMY, PASSENGER COMPARTMENT		200		56-21-00
	WINDOW - FWD PASSENGER/CREW DOOR		831 841		56-31-00
	WINDOW - AFT PASSENGER/CREW DOOR		833 843		56-31-00
	WINDOW - VIEWING, NOSE LANDING GEAR		121	121BL	56-41-00
	WINDOW - VIEWING, PASSENGER/CREW DOOR		831 833 841 843		56-41-00


STA4120/FR76
STA3938/FR73
AFT PASSENGER CREW DOOR WINDOW REF. 56-31-00 VIEWING WINDOWS REF. 56-41-00
PASSENGER COMPARTMENT WINDOWS REF. 56-21-00 PASSENGER COMPARTMENT DUMMY WINDOWS REF. 56-21-00
FWD PASSENGER/CREW DOOR WINDOW REF. 56-31-00 VIEWING WINDOWS REF. 56-41-00
FLIGHT COMPARTMENT WINDOWS REF. 56-10-00
STA1285/FR16A
STA1163/FR14
NOSE LANDING GEAR VIEWING WINDOW REF. 56-41-00
STA766/FR1
121BL
STA972/FR10
B M 6 56 00 00 0 AC M 0-12

Location of Windows
Figure 001

3. Description and Operation

A. Flight Compartment Windows

(1) The windshields and fixed side windows are mounted in a frame attached to the fuselage. The sliding side windows are attached to the frame by bogies mounted on support tracks.

(2) Each window assembly comprises three panes of toughened glass bounded by a rubber seal. The windshields are installed from outside of the aircraft and the four side windows are installed from inside the flight compartment.

(3) An electrical heating element is installed between :
- the outer and center pane for the front windshields.
- the inner and center pane for the side windshields.
The electric element prevents misting of the internal faces and icing of the exterior faces of the windows.

(4) The sliding side windows have an actuating mechanism for opening, closing and locking. The windows also serve as emergency exits for the crew.

B. Passenger Compartment Windows

(1) The window assemblies comprise an inner pane of stretched acrylic and an
R outer pane of colorless stretched acrylic, retained in position by a sealing ring.

(2) The different types of outer panes and their sealing rings are not interchangeable.

(3) A hole through the inner pane maintains cabin pressure within the window assembly.

C. Passenger/Crew Door Window

(1) The window assemblies comprise an inner pane of stretched acrylic and an
R outer pane of colorless stretched acrylic, retained by a sealing ring.

(2) All components of the window assemblies are interchangeable.

(3) A hole through the inner pane maintains cabin pressure within the window assembly.

D. Passenger Compartment Dummy Windows

(1) The dummy window assembly comprises an outer plate with or without spacers manufactured from metal, retained by a sealing ring.
NOTE : Dummy window assemblies with or without spacers are interchangeable.

E. Inspection and Observation Windows

(1) The nose landing gear viewing window and mechanical indicator lighting window comprise a mounting, riveted to the structure, a packing seal, window and ring nut. The ring nut is locked by a spring locking assembly, which engages with slots on the ring nut.

(2) Each passenger/crew door has a small window, installed in the upper surface of the support arm panel, which enables the contents of the emergency operation cylinder to be read.

1. General

A. In Flight Compartment, between Frames 1 and 10 there are six window panels. Panel designation is as follows :
(1)Two front window panels - Captain and First Officer (Windshield Panels).
(2)Two sliding window panels which also serve as crew emergency exits (Sliding Side Window Panels).
(3)Two rear window panels (Fixed Side Window Panels).

2. Description

A. Each panel consists of three ply toughened glass, the plies being separated by two layers of polyvinyl butyral.
(1)The two thick layers of glass are called main plies.
(2)The thinnest layer of glass, or front ply, forms the exterior of the windshield panel.

B. The airtight sealing between the panels and their frames is ensured by use of silicone elastomer surrounds.

C. All panels are equipped with a heating system and two temperature probes (Ref. 30-42-00).

1. Measurement of Scratch Depth with MITUTOYO Surface Tester SJ201

A. Reason for the Job

This procedure tells you how to measure the depth of scratches on the glass windows with **MITUTOYO** surface tester **SJ201**.

B. Equipment and materials

REFERENCE	QTY	DESIGNATION
SJ201	1	Surface Tester SJ201
Referenced Procedures		
- 56-11-11, P. Block 601		Windshield Panels
- 56-11-12, P. Block 601		Fixed Side Window Panels
- 56-12-11, P. Block 601		Sliding Side Window Panels

C. Procedure

(1)General

Do this procedure to measure the scratches during :
- windshield inspection (Ref. 56-11-11, P. Block 601),
- fixed side window inspection (Ref. 56-11-12, P. Block 601),
- sliding side window inspection (Ref. 56-12-11, P. Block 601).

(2)Measurement (Ref. Fig. 601)

(a)Push the **POWER/DATA** key (3).

(b)Push the **START/STOP** key (1) :
- the detector moves.

(c)Push the **PARAMETER** key (2) until parameter Ry is shown on the LCD (4).

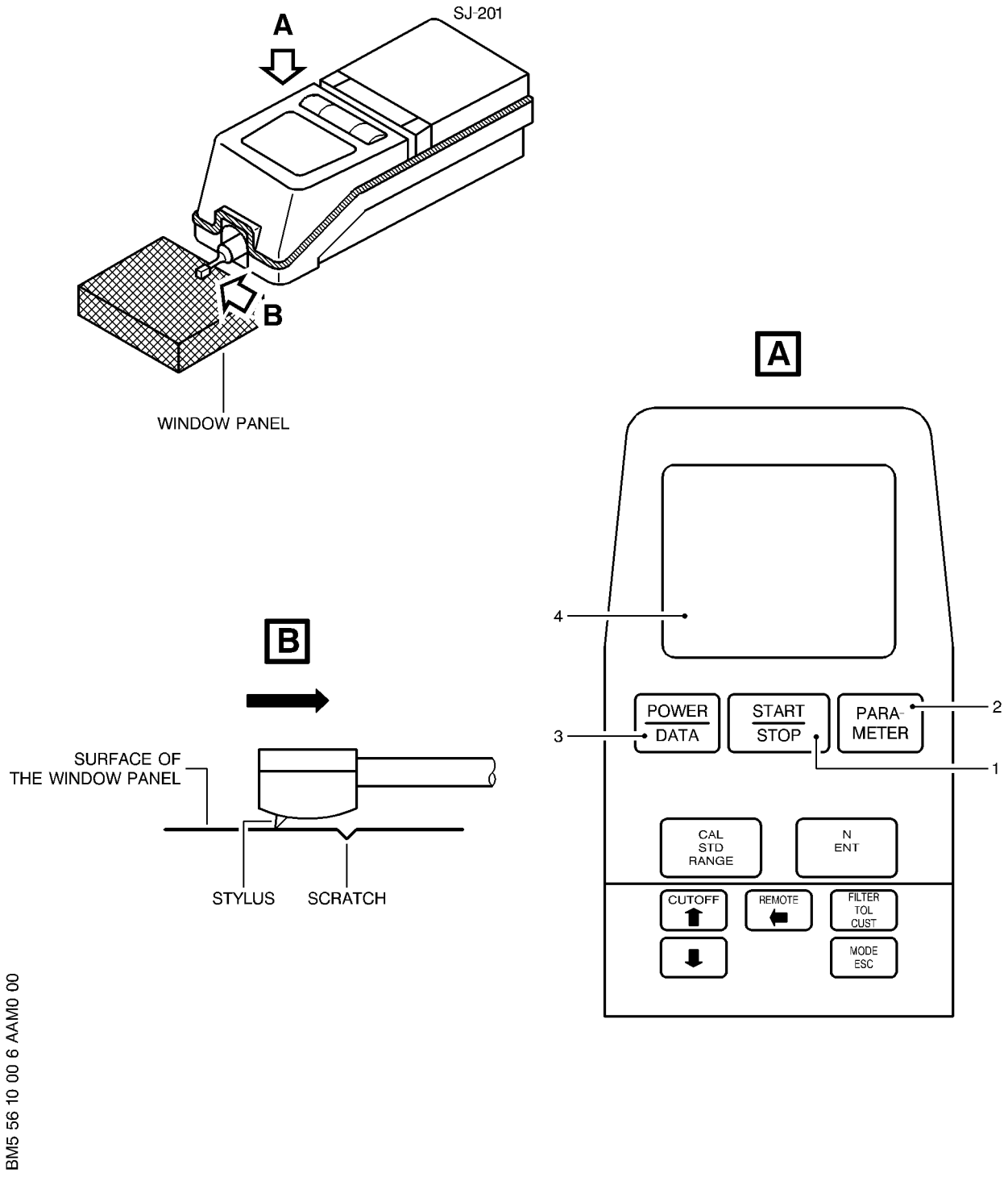
(d)Put the **SURFACE TESTER (SJ201)** in position on the window to make the detector travel direction perpendicular to the scratch.

(e)Push the **START/STOP** key (1) :
- the detector moves to measure the depth of the scratch,
- when the measurement is completed, the measured value is shown on the LCD (4).

(f)Because the depth of the scratch can be different along its length, measure the depth at a minimum of 3 locations along the scratch :
- at each end and in the middle of the scratch,
- or more if it is a long scratch.

(g)Compare the largest depth value measured with the scratch depth limit values given in the figure related to the scratch inspection (Ref. 56-11-11, P. Block 601) or (Ref. 56-11-12, P. Block 601) or (Ref. 56-12-11, P. Block 601).

(h)When the power is off, push the **POWER/DATA** key and the **START/STOP** key (1) at the same time :
- this retracts the detector.



BM5 56 10 00 6 AAM0 00

Surface Tester SJ201
Figure 601

R COCKPIT WINDOWS - DEACTIVATION/REACTIVATION

WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE OPENED, SAFETIED AND TAGGED.

1. Reason for the Job

R A. Ref. MMEL Sect. 1-56 item 1

2. Equipment and Materials

ITEM	DESIGNATION
R A.	Access Platform 5.7 m (18 ft. 8 in.)
Referenced Procedures	
R - 24-42-00, P. Block 301	Ground Service Bus Control
R	- Servicing
- 56-11-11, P. Block 601	Windshield Panels
- 56-11-12, P. Block 601	Fixed Side Window Panels
- 56-12-11, P. Block 601	Sliding Side Window Panels

3. Procedure

A. Job Set-Up

R (1)Position access platform.
R (2)Energize the ground service network (Ref. 24-42-00, P. Block 301).
R (3)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
R 101VU	WINDOW/HEAT	1DG	GEN1/C20
R 101VU	WINDOW/HEAT	2DG	GEN2/C20
R 132VU	ANTI/ICE/WINDOW/HEAT/L/115VAC/REF	3DG	L65
R 132VU	ANTI/ICE/WINDOW/HEAT/R/115VAC/REF	4DG	L69
R 132VU	ANTI/ICE/WINDOW/HEAT/L/REG & WARN	5DG	P67
R 132VU	ANTI/ICE/WINDOW/HEAT/R/REG & WARN	6DG	N66
R 132VU	ANTI-ICE/WINDOW HEAT/L/SIDE WINDOW	7DG	324/L64
R 132VU	ANTI-ICE/WINDOW HEAT/R/SIDE WINDOW	8DG	324/L70

B. Check

(1)Inspect the windshields for: cracks, scratches, chips, delamination, bubbles, discoloration, transparency, interlayer microflakes, burn spots and burning (Ref. 56-11-11, P. Block 601).
(2)Inspect the fixed windows for: cracks, scratches, chips, delamination, discoloration, burn spots, transparency, interlayer microflakes and bubbles (Ref. 56-11-12, P. Block 601).
(3)Inspect the sliding windows for: cracks, scratches, chips, delamination, discoloration, transparency, interlayer microflakes, bubbles and burn spots (Ref. 56-12-11, P. Block 601).

C. Close-Up
(1)Remove safety clips and tags and close circuit breakers 1DG, 2DG, 3DG, 4DG, 5DG, 6DG, 7DG and 8DG.

D. Deactivation of the Windshield De-Icing
(1)If the windshield outer ply is cracked or if the windshield has burn spots that are equal to or more than the acceptable limit:
(a)Open, safety and tag this(these) circuit breaker(s):
- for the left side: 3DG,
- for the right side: 4DG.
(b)Make an entry in the aircraft technical logbook.

E. Deactivation of the Lateral Window De-Icing
(1)If the fixed or sliding window outer ply is cracked or if the window has burn spots that are equal to or more than the acceptable limit:
(a)Open, safety and tag this(these) circuit breaker(s):
- for the left side: 7DG,
- for the right side: 8DG.
(b)Make an entry in the aircraft technical logbook.

R F. De-energize the ground service network (Ref. 24-42-00, P. Block 301).

3. Reactivation

A. Referenced Procedures

ITEM	DESIGNATION
R	
- 56-11-11, P. Block 601	Windshield Panels
- 56-11-12, P. Block 601	Fixed Side Window Panels
- 56-12-11, P. Block 601	Sliding Side Window Panels

B. Reactivation of the Windshield
(1)Replace the deactivated windshield (Ref. 56-11-11, P. Block 401).
(2)Remove safety clips and tags and close circuit breakers 3DG and 4DG.

C. Reactivation of the Fixed or Sliding Window
(1)Replace the deactivated fixed window (Ref. 56-11-12, P. Block 401) or sliding window (Ref. 56-12-11, P. Block 401).
(2)Remove safety clips and tags and close circuit breakers 7DG and 8DG.
R

FIXED WINDOWS - DESCRIPTION AND OPERATION

1. General

A. In flight compartment, there are four fixed window panels.
  (1)Two front panels, located in front of Captain and First Officer (Windshield Panels).
  (2)Two rear panels, located between frames 7 and 10 (Fixed Side Window Panels).

B. The structure of the front and rear panels is the same, the only difference is in shape.
  (1)Each panel consists of three ply toughened glass, the plies being separated by two layers of polyvinyl butyral.
  (2)The two thick layers of glass, or main plies, form the resistant structure of the panel.
  (3)The thinnest layer of glass, or front ply, forms the exterior of the panel and is flush with the outside skin profile of the aircraft
  (4)The panel heating system is located between the front ply and the layer of butyral

2. Windshield Panel Assembly (Ref. Fig. 001)

A. The windshield panels are equipped with silicone elastomer seal surrounds.

B. Each panel is installed in a frame consisting of two vertical pillars and the upper and lower frame members.

C. They are held in position by retainers bolted to the frame structure.

D. Power supply from the aircraft electrical network to the panel heating system is provided via an electrical connector.

E. Both panel assemblies are equipped with windshield wipers.

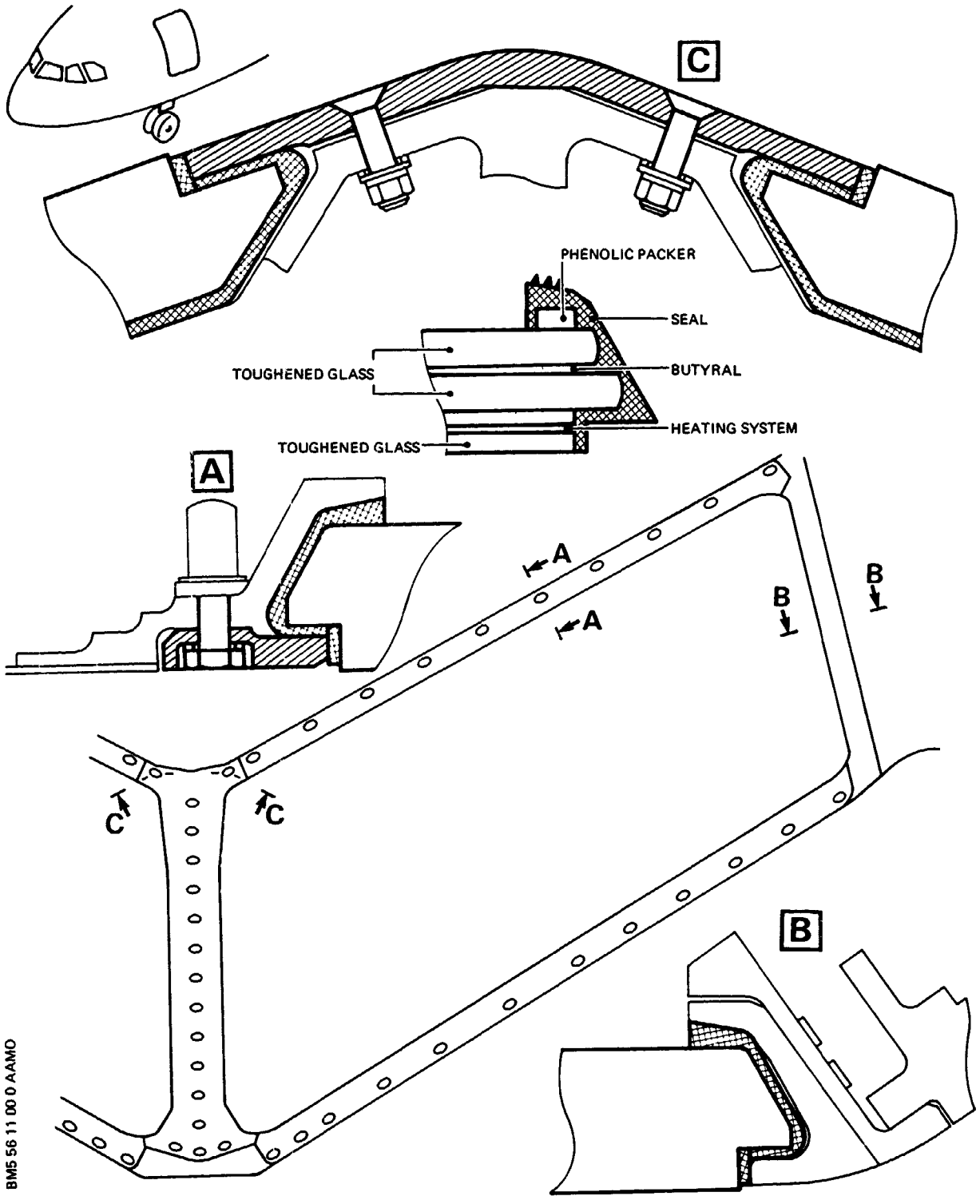
3. Fixed Side Window Panel Assembly (Ref. Fig. 002)

A. Fixed side window panels are equipped with silicone elastomer seal surrounds.

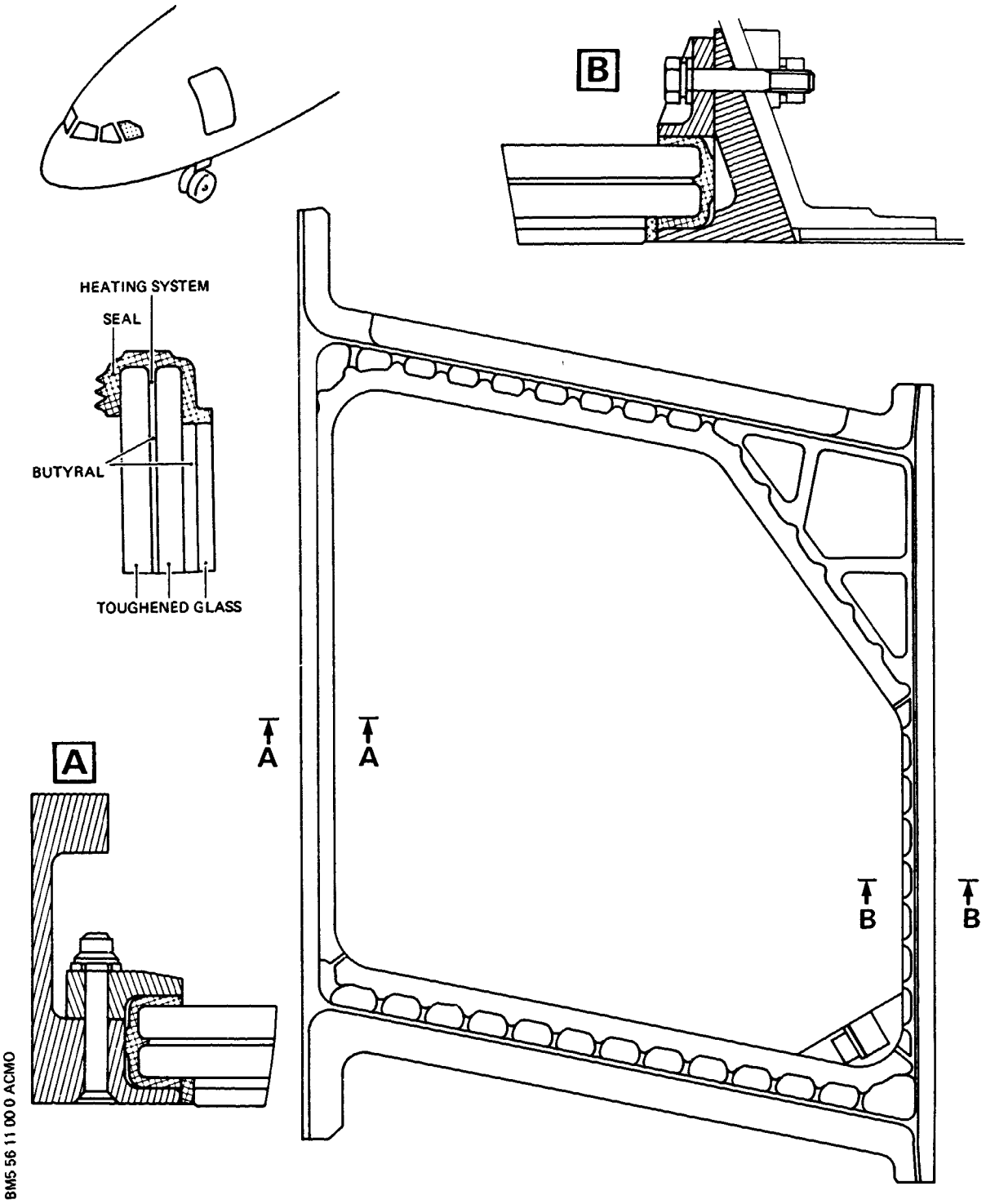
B. Each panel is installed in a frame consisting of two vertical pillars pillars formed by frames 7 and 10 and the upper and lower frame members.

C. They are held in position by retainers bolted to the frame structure.

D. Power supply from the aircraft electrical network to the panel heating system is provided via an electrical connector.



Windshield Panel Assembly
Figure 001



Fixed Side Window Panel Assembly
Figure 002

WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE OPENED, SAFETIED AND TAGGED.

NOTE : For the installation of the windshield, three tools are available:
- 98D56103001000
- 98F56103500000
The tool 98F56103500000 is the latest tooling developed by Airbus to ease the windshield adjustment.

NOTE : For fasteners that you cannot remove easily, there are two alternative tools:
- 98A53003500000

R

1. Removal and Installation of the Windshield Panels with the Tool 98D56103001000

A. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 5.7 m (18 ft. 8 in.)
B.	Circuit Breaker Safety Clips
C.	Rain Protective Cap
D.	Wooden Shims, 1.4 mm (0.055 in.) thick
E.	Wooden Shims, 1 mm (0.039 in.) thick
F. Material No. 04-012	Common Greases (Ref. 20-31-00)
G. Material No. 08-052	Bonding and Adhesive Compounds (Ref. 20-31-00)
H. Material No. 09-002	Sealants (Ref. 20-31-00)
J. Material No. 09-015	Sealants (Ref. 20-31-00)
K. Material No. 09-016	Sealants (Ref. 20-31-00)
L. Material No. 09-053	Sealants (Ref. 20-31-00)
M. Material No. 09-019	Sealants (Ref. 20-31-00)
N. Material No. 10-002	Anti-Icing and De-Icing Materials (Ref. 20-31-00)
P. Material No. 13-002	Pretreatment for Painting (Ref. 20-31-00)
Q. Material No. 16-001	Structure Paints (Ref. 20-31-00)
R. 98D56103001000	Installation Tool - Front Window Panels
S. 98A53003500000	Fastener Removal Tool
Referenced Procedures	
- 30-42-00, P. Block 501	Windshield Panel Anti-Icing and Defogging
- 30-45-14, P. Block 401	Wiper Arm
- 30-45-54, P. Block 401	Spray Nozzle
- 34-28-21, P. Block 401	Standby Compass

B. Job Set-Up
(1)Position access platform.
(2)Remove electrical connector protective plate.
(3)Remove windshield wiper arm (Ref. 30-45-14, P. Block 401).
(4)Remove windshield spray nozzle (Ref. 30-45-54, P. Block 401).

(5)Remove standby compass if required. (Ref. 34-28-21, P. Block 401).
(6)Open the sliding windows.
(7)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
101VU	WINDOW/HEAT	1DG	GEN1/C20
101VU	WINDOW/HEAT	2DG	GEN2/C20
132VU	ANTI/ICE/WINDOW/HEAT/L/115VAC/REF	3DG	L65
132VU	ANTI/ICE/WINDOW/HEAT/R/115VAC/REF	4DG	L69
132VU	ANTI/ICE/WINDOW/HEAT/L/REG & WARN	5DG	P67
132VU	ANTI/ICE/WINDOW/HEAT R/REG & WARN	6DG	N66

**ON A/C 001-001,

C. Removal (Ref. Fig. 401)
CAUTION : AS BOLTS ARE OF DIFFERENT LENGTHS, MARK RELEVANT LOCATIONS.
NOTE : If you cannot remove the fasteners easily, do the procedure with the fastener removal tool in Para. (4).
(1)Loosen and disconnect the electrical connector (17) from the plug (44).
(2)Remove sealing compound from around bolts (10 and 16).
(3)Remove bolts (2, 3, 6, 10, 11, 16, 19 and 21). Retain washers (9) for bolts (10), washers (13), shims (25), rest blocks (14) and washers (12) for bolts (11), washers (15) for bolts (16), washers (24) and nuts (23) for bolts (19), and nut (8) for bolt (6).

**ON A/C 002-200,

C. Removal (Ref. Fig. 402)
CAUTION : AS BOLTS ARE OF DIFFERENT LENGTHS, MARK RELEVANT LOCATIONS.
NOTE : If you cannot remove the fasteners easily, do the procedure with the fastener removal tool in Para. (4).
(1)Loosen and disconnect the electrical connector (17) from the plug (44).
(2)Remove sealing compound from around bolts (10 and 16).
(3)Remove bolts (2, 3, 6, 10, 11, 16, 19 and 21). Retain washers (9) for bolts (10), washers (13), shims (25), rest blocks (14) and washers (12) for bolts (11), washers (15) for bolts (16), washers (24) and nuts (23) for bolts (19) and nut (8) for bolt (6).

**ON A/C ALL

(4)Remove the fasteners that you cannot remove easily (Ref. Fig. 403).
(a)Install the fastener removal tool 98A53003500000 for the fastener you must remove:
1 Install the spacer (30) on the captive nut (37) of a removed fastener.
2 Install the slider (33) on the spacer (30).
3 Install the crossbeam (34) on the slider (33).
4 Install the pin (32).

5 Put the spindle (35) in line with the fastener (36) you must remove.
6 Tighten the pad screw (31).
(b)Remove the related fastener (36).
R (c)Remove the fastener removal tool 98A53003500000.

(5)Remove compass calibration card holder (4) and compass mounting bracket (5) if required.
(6)Remove retainers (18, 20 and 22).
NOTE : Nut strip (7) is cemented to structure, do not remove.
(7)Install protective cap over rain repellent nozzle.
CAUTION : EACH WINDSHIELD PANEL WEIGHS APPROXIMATELY 40KG (88 LB.). SUFFICIENT PERSONNEL MUST BE AVAILABLE DURING HANDLING. THE WINDSHIELD PANEL SEAL IS FRAGILE. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SEAL AND GLASS PLIES.
CAUTION : DO NOT USE SHARP TOOLS OR OBJECTS TO REMOVE/INSTALL THE WINDSHIELD. DO NOT USE A LEVER AGAINST THE EDGE OF THE WINDSHIELD. IF YOU USE SHARP TOOLS, YOU WILL CAUSE DAMAGE TO THE WINDSHIELD.
(8)Remove the windshield panel.
NOTE : If the windshield is difficult to remove, do not use any kind of lever which could damage the seal.
NOTE : Two persons are necessary to remove the windshield from its frame.
(a)From the flight compartment, push the windshield panel with one hand on the upper section near the center post.
Another person, outside the aircraft, gets the windshield panel when it moves out of its frame at the center post.
(b)Remove the windshield panel.

D. Preparation of Replacement Component
(1)Clean retainers (18, 20 and 22) and frame. Handle peel shim packings (1) with care.
(2)Check condition of compass calibration card holder (4) and compass mounting bracket (5).
(3)Check that window frame and especially the center post are in good condition, i.e. free of dents, cracks, marks, scratches, deformation, corrosion, buckling, pulled or missing fasteners.
(4)In the event that nut strip (7) has become detached from structure, proceed as follows.
(a)Clean nut strip (7).
(b)Clean mating surface on frame.
(c)Coat contact surface of nut strip (7) with Material No. 09-002 and position on frame. Hold in position whilst installing the corresponding bolts.
(5)Slave all retainers (18, 20 and 22) with some attachment bolts (3, 10 and 16) to frame. Do not tighten at this stage.
(6)Check that retainers are correctly assembled and seat correctly on frame.
(7)Remove retainers.
(8)Check that handling of panel has not caused chipping or scratches.

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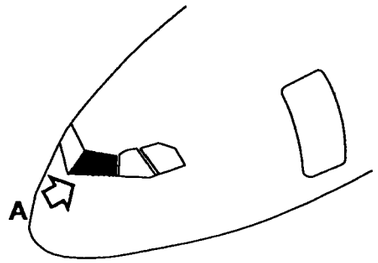
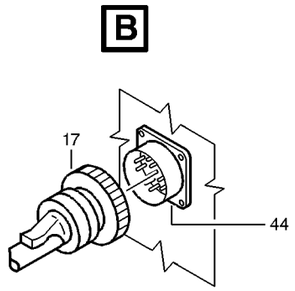
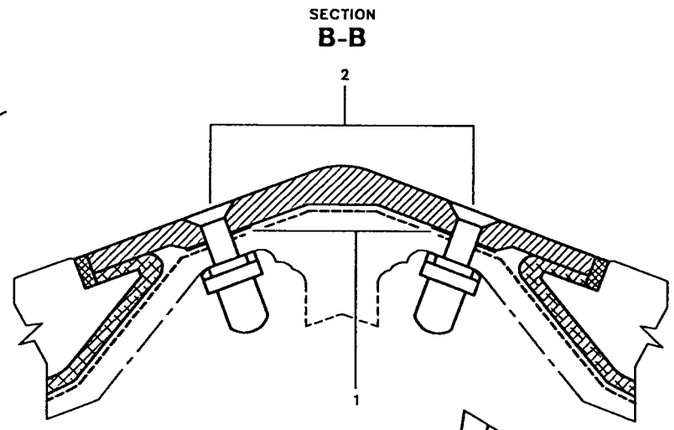
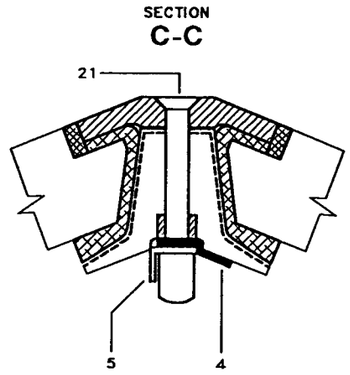
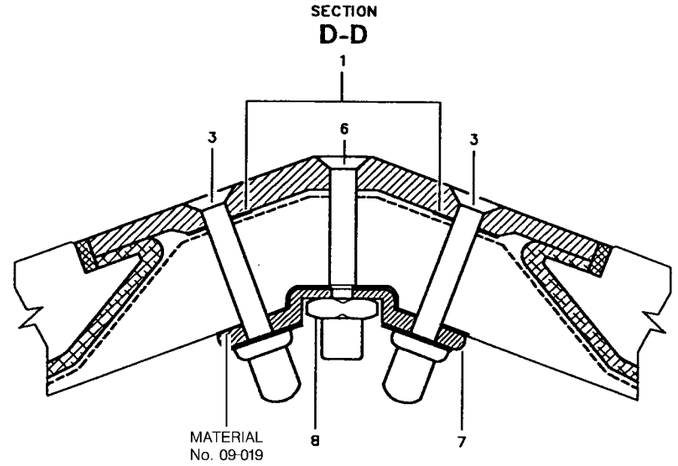


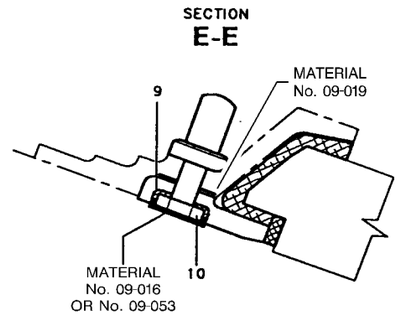


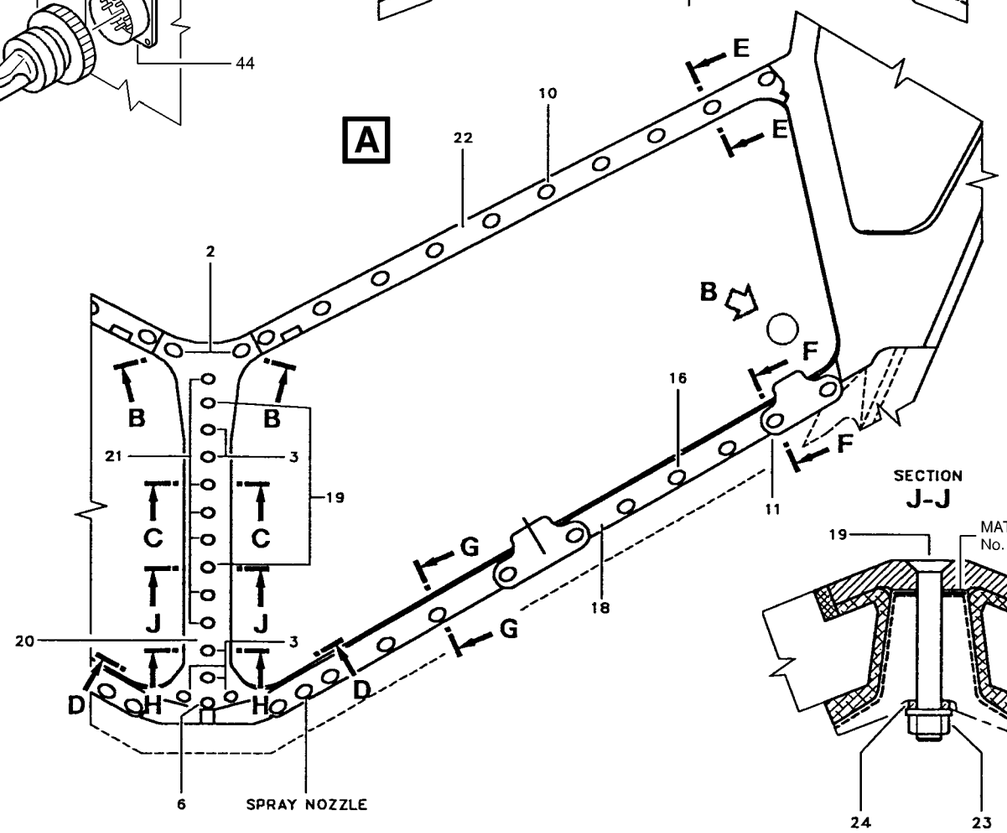


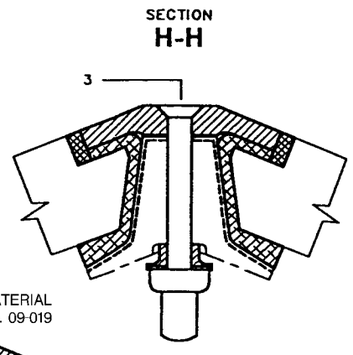


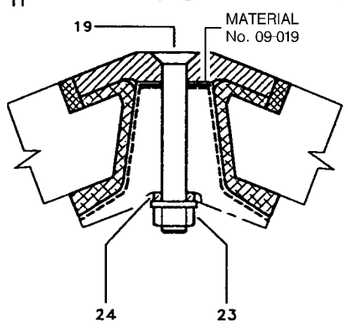


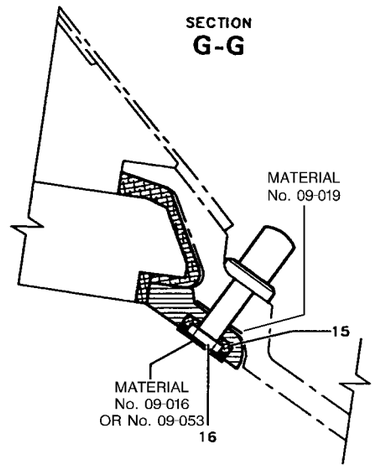
ITEM 2 = 2 COUNTERSUNK HEAD BOLTS, TOTAL LENGTH = 34.9mm(1.37in.)
ITEM 3 = 6 COUNTERSUNK HEAD BOLTS, TOTAL LENGTH = 66.7mm(2.62in.)
ITEM 6 = 1 COUNTERSUNK HEAD BOLT, TOTAL LENGTH = 59.7mm(2.35in.)
ITEM 10 = 10 HEX-HEAD BOLTS, LENGTH UNDER HEAD = 32.5mm(1.27in.)
ITEM 11 = 4 COUNTERSUNK HEAD BOLTS, TOTAL LENGTH = 47.6mm(1.87in.)
ITEM 16 = 7 HEX-HEAD BOLTS, LENGTH UNDER HEAD = 37.3mm(1.47in.)
ITEM 19 = 2 COUNTERSUNK HEAD BOLTS, TOTAL LENGTH = 69.8mm(2.75in.)
ITEM 21 = 6 COUNTERSUNK HEAD BOLTS, TOTAL LENGTH = 58.7mm(2.31in.)

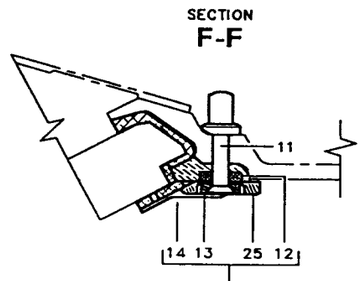










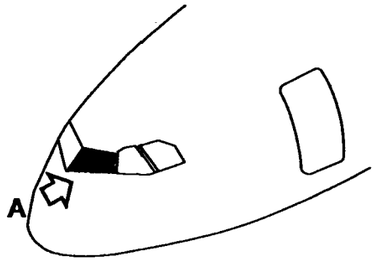


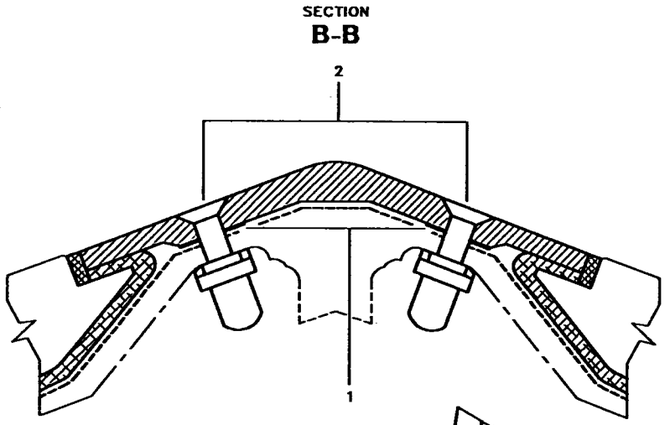
WASHER/SCREW SEALING USING MATERIAL No. 09-15

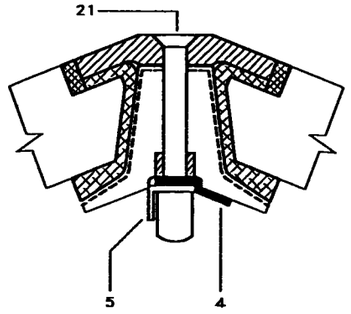
------- AREAS TO BE ESPECIALLY INSPECTED

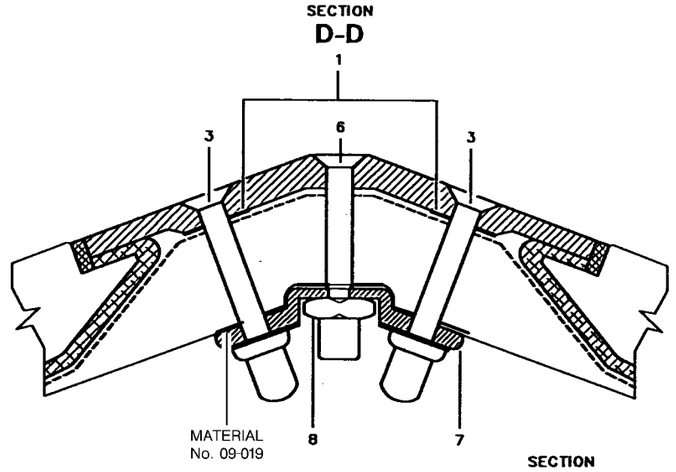
BM5 56 11 11 4 AFM0 09

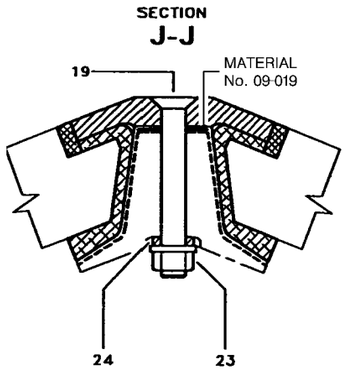
Windshield Panel
Figure 401



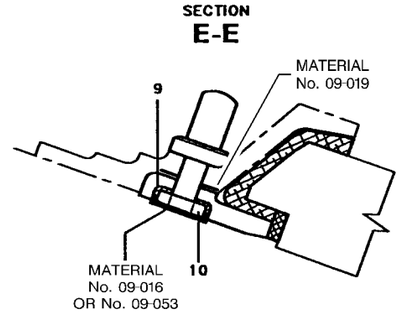


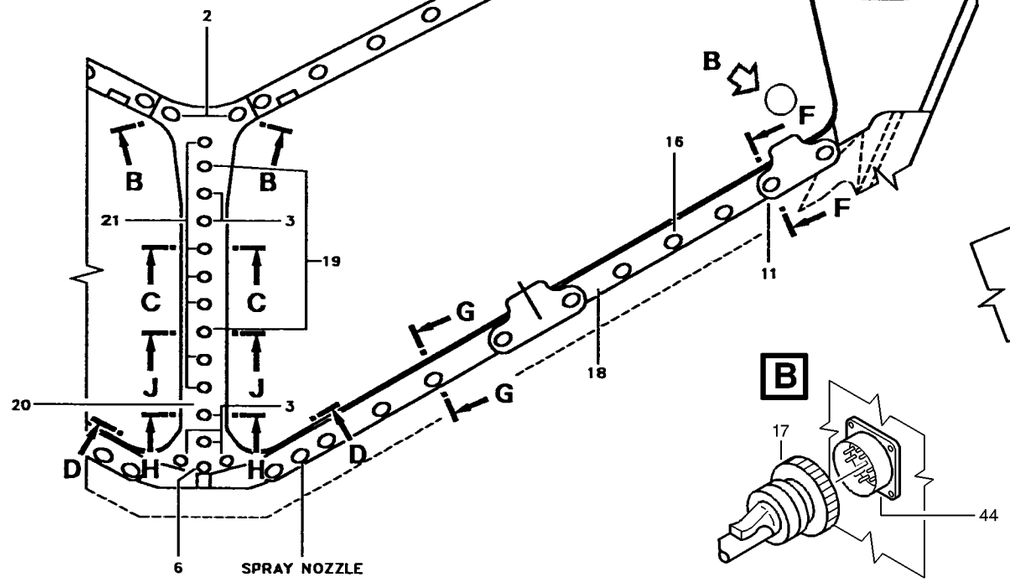


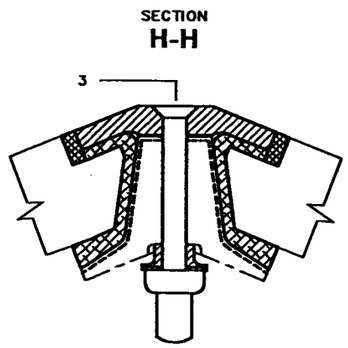


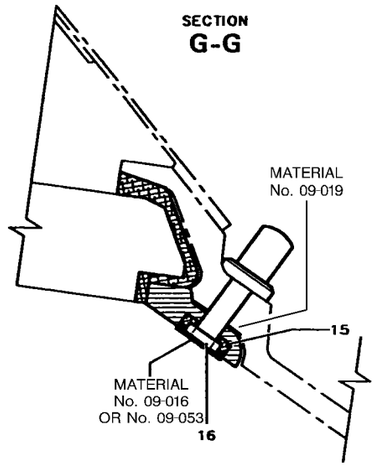


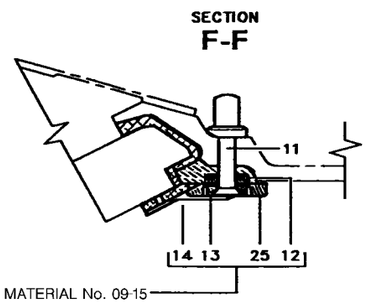
ITEM 2 = 2 COUNTERSUNK HEAD BOLTS, TOTAL LENGTH = 33.3mm(1.31in.)
ITEM 3 = 6 COUNTERSUNK HEAD BOLTS, TOTAL LENGTH = 65.5mm(2.58in.)
ITEM 6 = 1 COUNTERSUNK HEAD BOLT, TOTAL LENGTH = 59.7mm(2.35in.)
ITEM 10 = 10 HEX-HEAD BOLTS, LENGTH UNDER HEAD = 30.9mm(1.21in.)
ITEM 11 = 4 COUNTERSUNK HEAD BOLTS, TOTAL LENGTH = 46mm(1.81in.)
ITEM 16 = 7 HEX-HEAD BOLTS, LENGTH UNDER HEAD = 35.7mm(1.40in.)
ITEM 19 = 2 COUNTERSUNK HEAD BOLTS, TOTAL LENGTH = 68.7mm(2.70in.)
ITEM 21 = 6 COUNTERSUNK HEAD BOLTS, TOTAL LENGTH = 57.1mm(2.25in.)







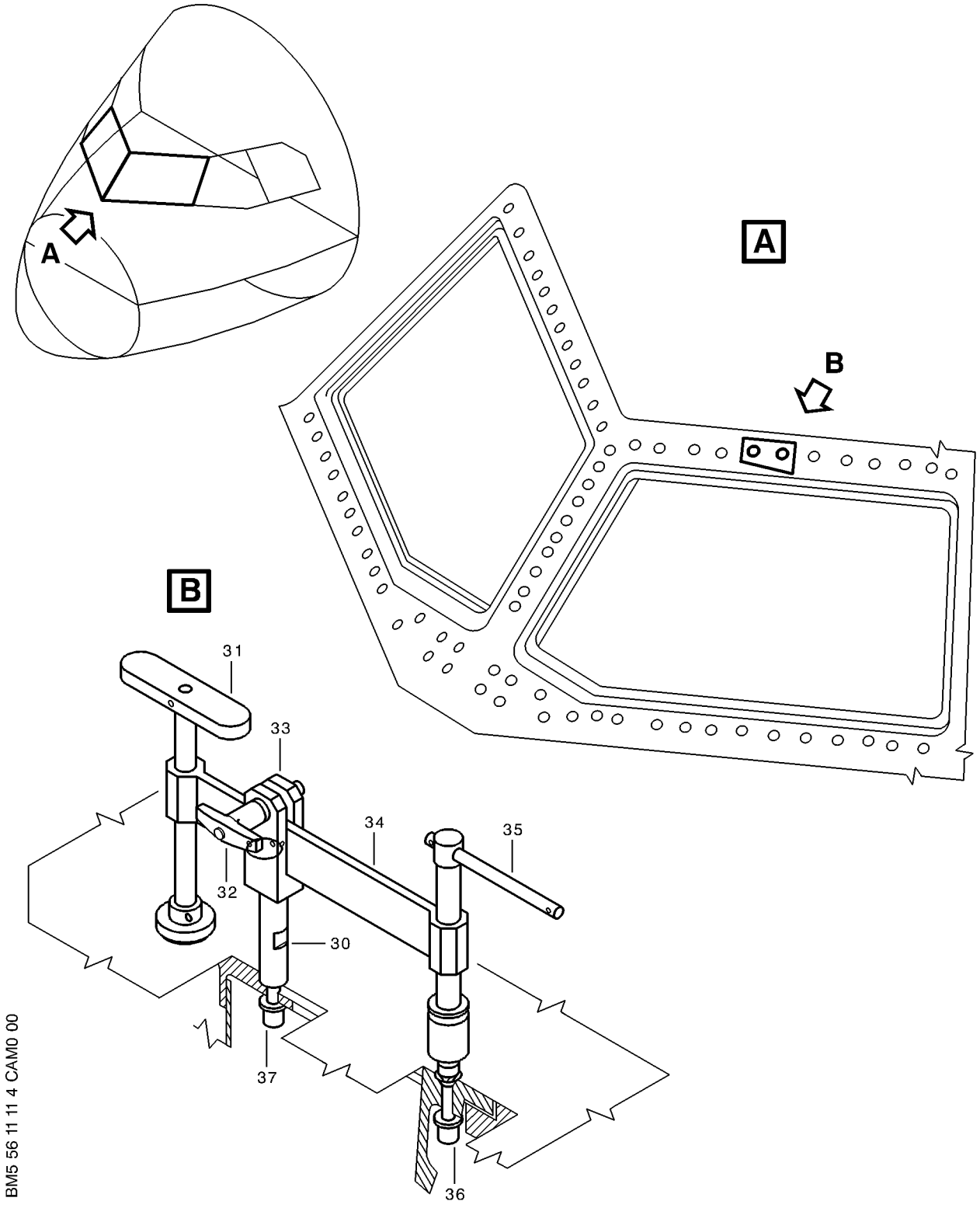




-------- AREAS TO BE ESPECIALLY INSPECTED

BM5 56 11 11 4 BFM0 07

Windshield Panel
Figure 402



Use of the Fastener Removal Tool
Figure 403

Check that electrical connector is in good condition and make certain that seal is not perished.

E. Installation (Ref. Fig. 404)

(1)Apply a generous coat of Mat. 04-012 to frame and windshield seal.

(a)Place protective cap over rain repellent nozzle.

CAUTION : EACH WINDSHIELD PANEL WEIGHS APPROXIMATELY 40KG (88 LB.). SUFFICIENT PERSONNEL MUST BE AVAILABLE DURING HANDLING. THE WINDSHIELD PANEL SEAL IS FRAGILE. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SEAL.

CAUTION : REMOVE THE WINDSHIELD PANELS FROM THEIR CONTAINER ONLY WHERE AND WHEN YOU INSTALL THEM.
KEEP THE PROTECTIVE FILM ON THE INTERNAL AND EXTERNAL SURFACES OF THE WINDSHIELD:
- WHEN YOU INSTALL THE PANELS
- WHEN YOU USE THE CENTERING TOOL.

CAUTION : DO NOT USE SHARP TOOLS OR OBJECTS TO REMOVE/INSTALL THE WINDSHIELD. DO NOT USE A LEVER AGAINST THE EDGE OF THE WINDSHIELD. IF YOU USE SHARP TOOLS, YOU WILL CAUSE DAMAGE TO THE WINDSHIELD.

(2)Position panel in frame.

CAUTION : BOLTS ATTACHING WINDSHIELD PANELS ARE OF DIFFERENT TYPES AND LENGTHS.
MAKE CERTAIN THAT BOLT LENGTH CORRESPONDS TO PANEL THICKNESS.

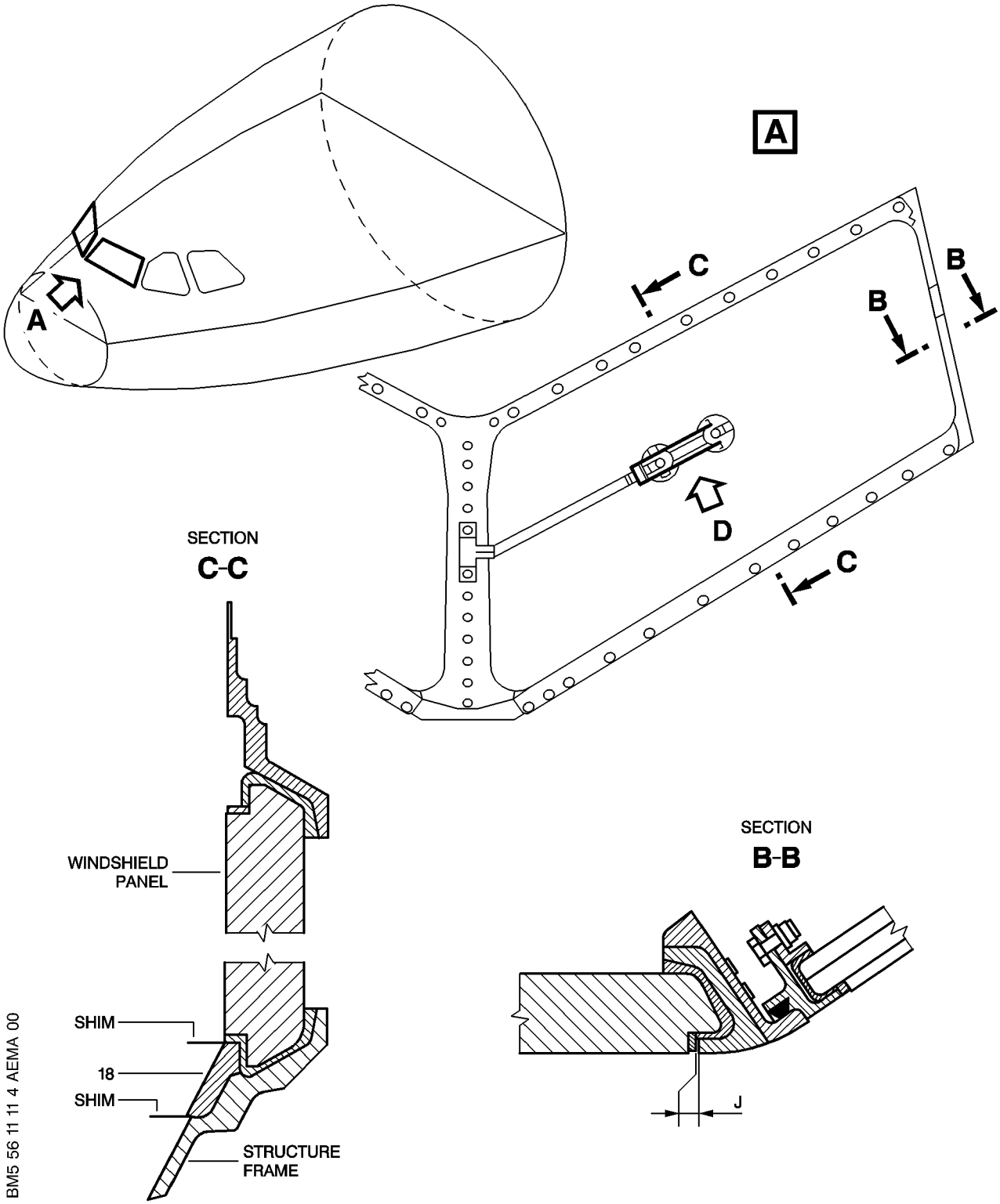
(a)Dimensions of Attaching Bolts

**ON A/C 001-001,

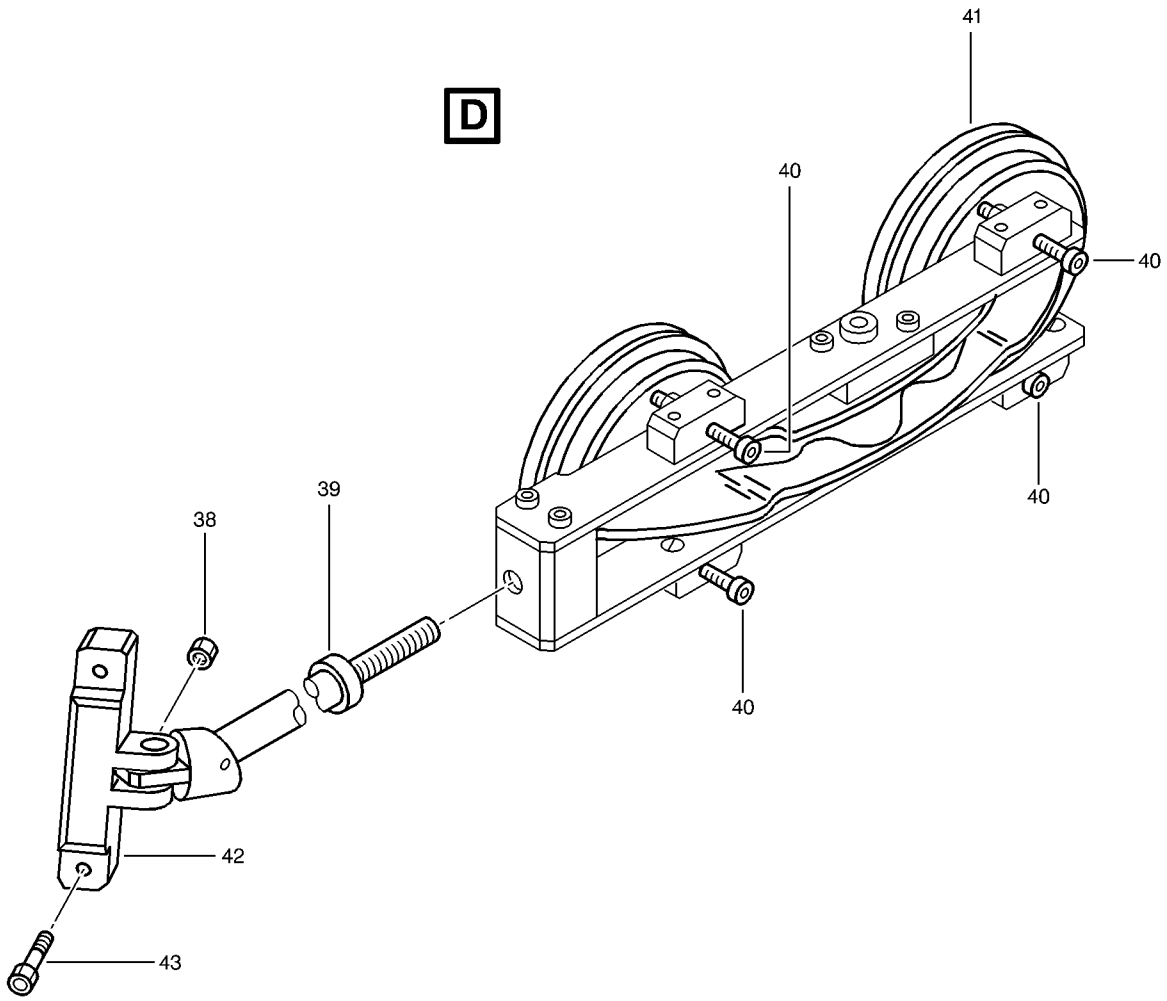
(Ref. Fig. 401)
Item 2 = 2 countersunk head bolts, total length = 34.9 mm (1.37 in.)
Item 3 = 6 countersunk head bolts, total length = 66.7 mm (2.62 in.)
Item 6 = 1 countersunk head bolt, total length = 59.7 mm (2.35 in.)
Item 10 = 10 hex-head bolts, length under head = 32.5 mm (1.27 in.)
Item 11 = 4 countersunk head bolts, total length = 47.6 mm (1.87 in.)
Item 16 = 7 Hex-head bolts, length under head = 37.3 mm (1.47 in.)
Item 19 = 2 countersunk head bolts, total length = 69.8 mm (2.75 in.)
Item 21 = 6 countersunk head bolts, total length = 58.7 mm (2.31 in.)

**ON A/C 002-200,

(Ref. Fig. 402)
Item 2 = 2 countersunk head bolts, total length = 33.3 mm (1.31 in.)
Item 3 = 6 countersunk head bolts, total length = 65.5 mm (2.58 in.)
Item 6 = 1 countersunk head bolt, total length = 59.7 mm (2.35 in.)
Item 10 = 10 hex-head bolts, length under head = 30.9 mm (1.21 in.)
Item 11 = 4 countersunk head bolts, total length = 46 mm (1.81 in.)
Item 16 = 7 Hex-head bolts, length under head = 35.7 mm (1.40 in.)
Item 19 = 2 countersunk head bolts, total length = 68.7 mm (2.70 in.)
Item 21 = 6 countersunk head bolts, total length = 57.1 mm (2.25 in.)



Windshield Panel (Sheet 1/2)
Figure 404



BM5 56 11 11 4 AEMB 01

Windshield Panel (Sheet 2/2)
Figure 404

Printed in France

**ON A/C 001-002,

(b)If during installation of attaching bolts problems occur due to bolt overlength, replace bolts as follows:
Replace following attaching bolts by shorter bolts:
Item 2 = 34.9 mm (1.37 in.) by 33.3 mm (1.31 in.)
Item 3 = 66.7 mm (2.62 in.) by 65.5 mm (2.58 in.)
Item 10 = 32.5 mm (1.27 in.) by 30.9 mm (1.21 in.)
Item 11 = 47.6 mm (1.87 in.) by 46 mm (1.81 in.)
Item 16 = 37.3 mm (1.47 in.) by 35.7 mm (1.4 in.)
Item 19 = 69.8 mm (2.75 in.) by 68.7 mm (2.7 in.)
Item 21 = 58.7 mm (2.31 in.) by 57.1 mm (2.25 in.)

**ON A/C ALL

(3)Check from the flight compartment that the three sealing lips of the windshield are in contact all around the frame.
NOTE : If necessary, a non metallic wedge (without sharp edges) to be manufactured locally can be used to lever the windshield into the outboard frame recess.
(a)Remove the rain repellent nozzle protective cap.
(4)Put the lower retainer (18) in position and install two wooden shims, 1.4 mm (0.055 in.) thick, between the lower retainer (18) and the windshield panel (Ref. Fig. 404).
(5)With a non metallic lever, lift the lower retainer (18) and install two wooden shims, 1 mm (0.039 in.) thick, between the lower retainer (18) and the aircraft structure.
(6)Install five bolts (16) and the washers (15) and lightly tighten the bolts (16).
(7)Adjust the windshield panel.
CAUTION : REMOVE THE WINDSHIELD PANELS FROM THEIR CONTAINER ONLY WHERE AND WHEN YOU INSTALL THEM.
KEEP THE PROTECTIVE FILM ON THE INTERNAL AND EXTERNAL SURFACES OF THE WINDSHIELD:
- WHEN YOU INSTALL THE PANELS
- WHEN YOU USE THE CENTERING TOOL.
CAUTION : IN ORDER TO AVOID ANY DAMAGE TO THE WINDSHIELD:
- DO NOT USE SHARP TOOLS OR OBJECTS TO INSTALL THE WINDSHIELD.
- DO NOT USE A LEVER AGAINST THE FORWARD EDGE OF THE WINDSHIELD TO PUSH IT INTO THE AFT "U" FRAME.
(a)Install the installation tool 98D56103001000:
1 Put the installation tool 98D56103001000 in position on the windshield frame.
2 Install the fitting (42) on the center frame with the two bolts (43) and the nuts (38).
3 Secure the windshield with the suction cup (41).
4 Screw the four adjustable stops (40) against the windshield to stabilize the suction cups (41).
(b)Using the operating rod (39), adjust the windshield panel laterally to get the peripheral gaps J between 0 and 1.5 mm (0 to 0.059 in.)

between the windshield panel and the aircraft structure with respect to the lateral post.

(c)Remove the installation tool 98D56103001000:

1 Unscrew the four adjustable stops (40).

2 Relieve the suction cup (41).

3 Remove the two bolts (43) and the nuts (38).

4 Remove the tool.

(8)Apply a coat of sealant (Material No. 09-019) between the structure and the retainers.

(9)Install the remaining washers (15) with the bolts (16). Install and seal according to sections F the washers (12), the rest block (14), the shim (25), the washers (13) and the bolts (11) using Material No. 09-015. Do not tighten.

(10)Install the upper retainer (22) and the washers (9) with the bolts (10). Do not tighten.

(11)Install the front retainer (20), the compass calibration card holder (5) and the compass mounting bracket (4) with the bolts (21) and (19), the washers (24), the nuts (23) and the bolts (3). Install the bolt (6) with the nut (8) and install the bolts (2).

(12)Tighten the bolts progressively and alternately. TORQUE to between 1.2 and 1.5 m.daN (106 and 133 lbf.in.).

(13)Remove the shims located between the lower retainers (18) and the windshield panel and the aircraft structure.

(14)Check that the upper retainer to panel into wind value is between 0.5 and 1.1 mm (0.02 and 0.043 in.).

(15)Flush off the countersinks and bolt heads of the upper (22) and lower (18) retainers with Sealants (Material No. 09-016 or Material No. 09-053).

NOTE : If you use PR1436GB-ND1/2 at 23°, the application time is 1/2 hour and the cure time is 24 hours. If you use PR1436GB2-NA at 23°, the application time is 2 hours and the cure time is 30 hours. If you use PR1436GB4-NA at 23°, the application time is 4 hours and the cure time is 40 hours. If you use DAPCO 72 at 23°, the application time is 1/4 hour and the cure time is 2 1/2 hours.

NOTE : The function of the sealant is to make sure there is good aerodynamic flow and to seal the area from water intrusion.
- If inclement weather conditions such as rain or snow exist which may result in moisture entrapment during the sealing operations, it is permissible to defer the sealant application for a period not to exceed two weeks. It is desirable to have the sealant application completed at the first gateway with suitable environmental conditions.
- Put a strip of speed tape over all unsealed areas before departure.

(16)Apply a bead of Sealants (Material No. 09-016 or Material No. 09-053) at the intersection area between:

(a)the frame structure and the lower retainer (18),

(b)the frame structure and the upper retainer (22),

(c)the front retainer (20) and the upper (22) and lower (18) retainers.

NOTE : If you use PR1436GB-ND1/2 at 23°, the application time is 1/2 hour and the cure time is 24 hours. If you use PR1436GB2-NA at 23°, the application time is 2 hours and the cure time is 30 hours. If you use PR1436GB4-NA at 23°, the application time is 4 hours and the cure time is 40 hours. If you use DAPCO 72 at 23°, the application time is 1/4 hour and the cure time is 2 1/2 hours.

(17)If the sealant cure time is not sufficient before the aircraft takes off, do the procedure below:

CAUTION : BEFORE YOU APPLY THE TAPE, MAKE SURE THAT THE SEALANT IS NOT TACKY. IF IT IS TACKY, THE TAPE CAN CAUSE DAMAGE TO THE SEALANT.

CAUTION : WHEN YOU APPLY THE TAPE, MAKE SURE THAT THERE ARE NO BUBBLES. THIS WILL HELP TO PREVENT THE REMOVAL OF THE TAPE DURING THE FLIGHT.

(a)Put a strip of Bonding and Adhesive Compounds (Material No. 08-052) on the intersection areas.

NOTE : If you use PR1436GB-ND1/2 at 23°, the sealant is not tacky after 10 hours. If you use PR1436GB2-NA at 23°, the sealant is not tacky after 16 hours. If you use PR1436GB4-NA at 23°, the sealant is not tacky after 28 hours. If you use DAPCO 72 at 23°, the sealant is not tacky after 40 minutes.

(b)Do a visual check of the intersection areas between each flight.

(c)Remove the Bonding and Adhesive Compounds (Material No. 08-052) after the sealant cure time.

NOTE : During the flight, temperatures are under 10° and the sealants do not dry. The sealant cure times given above do not include the flight hours.

(18)Connect the electrical connector (17) to the plug (44).

(19)Tighten the electrical connector (17).

(20)Remove the panel protective films.

F. Test

(1)Remove the safety clips and tags and close the circuit breakers 1DG, 2DG, 3DG, 4DG, 5DG and 6DG.

(2)Perform the windshield panel anti-icing and de-fogging operational test (Ref. 30-42-00, P. Block 501).

G. Close-Up

(1)Touch up paint finish if necessary (Mat. No. 13-002 and 16-001).

(2)Close the sliding windows.

(3)Install the windshield spray nozzle (Ref. 30-45-54, P. Block 401).

(4)Install the windshield wiper arm (Ref. 30-45-14, P. Block 401).

(5)Install the standby compass (Ref. 34-28-21, P. Block 401) if steps 1.B.(5) and 1.C.(5) have been performed.

(6)Install the electrical connector protective plate.

(7)Clean the panel surface with a solution containing 1/3 of Material No. 10-002 and 2/3 of water. Wipe with a clean dry lint-free cloth.

(8)Remove access platform.

2. Removal and Installation of the Windshield Panels with the Tool

98F56103500000

A. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 5.7 m (18 ft. 8 in.)
B.	Circuit Breaker Safety Clips
C.	Rain Protective Cap
D. Material No. 04-012	Common Greases (Ref. 20-31-00)
E. Material No. 08-052	Bonding and Adhesive Compounds (Ref. 20-31-00)
F. Material No. 09-002	Sealants (Ref. 20-31-00)
G. Material No. 09-015	Sealants (Ref. 20-31-00)
H. Material No. 09-016	Sealants (Ref. 20-31-00)
J. Material No. 09-053	Sealants (Ref. 20-31-00)
K. Material No. 09-019	Sealants (Ref. 20-31-00)
L. Material No. 10-002	Anti-Icing and De-Icing Materials (Ref. 20-31-00)
M. Material No. 11-003	Cleaning Agents (Ref. 20-31-00)
N. Material No. 13-002	Pretreatment for Painting (Ref. 20-31-00)
P. Material No. 16-001	Structure Paints (Ref. 20-31-00)
Q. 98F56103500000	R/I Front Window Tool
R. 98A53003500000	Fastener Removal Tool
Referenced Procedures	
- 30-42-00, P. Block 501	Windshield Panel Anti-Icing and Defogging
- 30-45-14, P. Block 401	Wiper Arm
- 30-45-54, P. Block 401	Spray Nozzle
- 34-28-21, P. Block 401	Standby Compass

B. Job Set-Up
(1)Position access platform.
(2)Remove electrical connector protective plate.
(3)Remove windshield wiper arm (Ref. 30-45-14, P. Block 401).
(4)Remove windshield spray nozzle (Ref. 30-45-54, P. Block 401).
(5)Remove standby compass if required. (Ref. 34-28-21, P. Block 401).
(6)Open the sliding windows.
(7)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
101VU	WINDOW/HEAT	1DG	GEN1/C20
101VU	WINDOW/HEAT	2DG	GEN2/C20
132VU	ANTI/ICE/WINDOW/HEAT/L/115VAC/REF	3DG	L65
132VU	ANTI/ICE/WINDOW/HEAT/R/115VAC/REF	4DG	L69
132VU	ANTI/ICE/WINDOW/HEAT/L/REG & WARN	5DG	P67
132VU	ANTI/ICE/WINDOW/HEAT R/REG & WARN	6DG	N66

**ON A/C 001-001,

C. Removal (Ref. Fig. 401)

CAUTION : AS BOLTS ARE OF DIFFERENT LENGTHS, MARK RELEVANT LOCATIONS.
NOTE : If you cannot remove the fasteners easily, do the procedure with the fastener removal tool in Para. (4).

(1)Loosen and disconnect the electrical connector (17) from the plug (44).
(2)Remove sealing compound from around bolts (10 and 16).
(3)Remove bolts (2, 3, 6, 10, 11, 16, 19 and 21). Retain washers (9) for bolts (10), washers (13), shims (25), rest blocks (14) and washers (12) for bolts (11), washers (15) for bolts (16), washers (24) and nuts (23) for bolts (19), and nut (8) for bolt (6).

**ON A/C 002-200,

C. Removal (Ref. Fig. 402)

CAUTION : AS BOLTS ARE OF DIFFERENT LENGTHS, MARK RELEVANT LOCATIONS.
NOTE : If you cannot remove the fasteners easily, do the procedure with the fastener removal tool in Para. (4).

(1)Loosen and disconnect the electrical connector (17) from the plug (44).
(2)Remove sealing compound from around bolts (10 and 16).
(3)Remove bolts (2, 3, 6, 10, 11, 16, 19 and 21). Retain washers (9) for bolts (10), washers (13), shims (25), rest blocks (14) and washers (12) for bolts (11), washers (15) for bolts (16), washers (24) and nuts (23) for bolts (19) and nut (8) for bolt (6).

**ON A/C ALL

(4)For the fasteners that you cannot remove easily (Ref. Fig. 403).
(a)Install the fastener removal tool 98A53003500000 for the fastener you must remove:
1 Install the spacer (30) on the captive nut (37) of a removed fastener.
2 Install the slider (33) on the spacer (30).
3 Install the crossbeam (34) on the slider (33).
4 Install the pin (32).
5 Put the spindle (35) in line with the fastener (36) you must remove.
6 Tighten the pad screw (31).
(b)Remove the related fastener (36).
R (c)Remove the fastener removal tool 98A53003500000.
(5)Remove compass calibration card holder (4) and compass mounting bracket (5) if required.
(6)Remove retainers (18, 20 and 22).
NOTE : Nut strip (7) is cemented to structure, do not remove.
(7)Install protective cap over rain repellent nozzle.

CAUTION : EACH WINDSHIELD PANEL WEIGHS APPROXIMATELY 40KG (88 LB.). SUFFICIENT PERSONNEL MUST BE AVAILABLE DURING HANDLING. THE WINDSHIELD PANEL SEAL IS FRAGILE. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SEAL AND GLASS PLIES.

CAUTION : DO NOT USE SHARP TOOLS OR OBJECTS TO REMOVE/INSTALL THE WINDSHIELD. DO NOT USE A LEVER AGAINST THE EDGE OF THE WINDSHIELD. IF YOU USE SHARP TOOLS, YOU WILL CAUSE DAMAGE TO THE WINDSHIELD.

(8)Remove the windshield panel.
NOTE : If the windshield is difficult to remove, do not use any kind of lever which could damage the seal.
NOTE : Two persons are necessary to remove the windshield from its frame.
(a)From the flight compartment, push the windshield panel with one hand on the upper section near the center post.
Another person, outside the aircraft, gets the windshield panel when it moves out of its frame at the center post.
(b)Remove the windshield panel.

D. Preparation of Replacement Component
(1)Clean retainers (18, 20 and 22) and frame. Handle peel shim packings (1) with care.
(2)Check condition of compass calibration card holder (4) and compass mounting bracket (5).
(3)Check that window frame and especially the center post are in good condition, i.e. free of dents, cracks, marks, scratches, deformation, corrosion, buckling, pulled or missing fasteners.
(4)In the event that nut strip (7) has become detached from structure, proceed as follows.
(a)Clean nut strip (7).
(b)Clean mating surface on frame.
(c)Coat contact surface of nut strip (7) with Material No. 09-002 and position on frame. Hold in position whilst installing the corresponding bolts.
(5)Slave all retainers (18, 20 and 22) with some attachment bolts (3, 10 and 16) to frame. Do not tighten at this stage.
(6)Check that retainers are correctly assembled and seat correctly on frame.
(7)Remove retainers.
(8)Check that handling of panel has not caused chipping or scratches.
Check that electrical connector is in good condition and make certain that seal is not perished.

E. Installation (Ref. Fig. 405)
(1)Clean the windshield housing with Material No. 11-003.
(2)Apply a generous coat of Material No. 04-012 to frame and windshield seal.
(3)Install the windshield panel.
WARNING : BE CAREFUL DURING THE REMOVAL/INSTALLATION OF THE WINDSHIELD TO PREVENT INJURY TO PERSONS AND/OR DAMAGE.
MAKE SURE THAT:
- THERE ARE SUFFICIENT PERSONS FOR THE TASK.
- YOU DO NOT CAUSE DAMAGE TO THE SEAL AND THE GLASS PLIES.
THE WINDSHIELD IS HEAVY.
CAUTION : REMOVE THE WINDSHIELD PANELS FROM THEIR CONTAINER ONLY WHERE AND WHEN YOU INSTALL THEM.
KEEP THE PROTECTIVE FILM ON THE INTERNAL AND EXTERNAL SURFACES OF THE WINDSHIELD:
- WHEN YOU INSTALL THE PANELS.
- WHEN YOU USE THE CENTERING TOOL.

CAUTION : IN ORDER TO AVOID ANY DAMAGE TO THE WINDSHIELD:
- DO NOT USE SHARP TOOLS OR OBJECTS TO INSTALL THE WINDSHIELD.
- DO NOT USE A LEVER AGAINST THE FORWARD EDGE OF THE WINDSHIELD TO PUSH IT INTO THE AFT "U" LATERAL FRAME.

CAUTION : DO NOT USE A SUCTION CUP TO HOLD THE INNER SURFACE OF THE WINDSHIELD PANEL IF THE PANEL HAS A SOFT (SELF HEALING) LINER (SUPPLIER SPS). THE SUCTION CUP WILL CAUSE DAMAGE TO THE SOFT LINER.
- DO NOT TRY TO REMOVE THE SOFT LINER.
THE SOFT LINER IS A PART OF THE WINDSHIELD PANEL.

CAUTION : BOLTS ATTACHING WINDSHIELD PANELS ARE OF DIFFERENT TYPES AND LENGTHS.
MAKE CERTAIN THAT BOLT LENGTH CORRESPONDS TO PANEL THICKNESS.

(a)Dimensions of Attaching Bolts

**ON A/C 001-001,

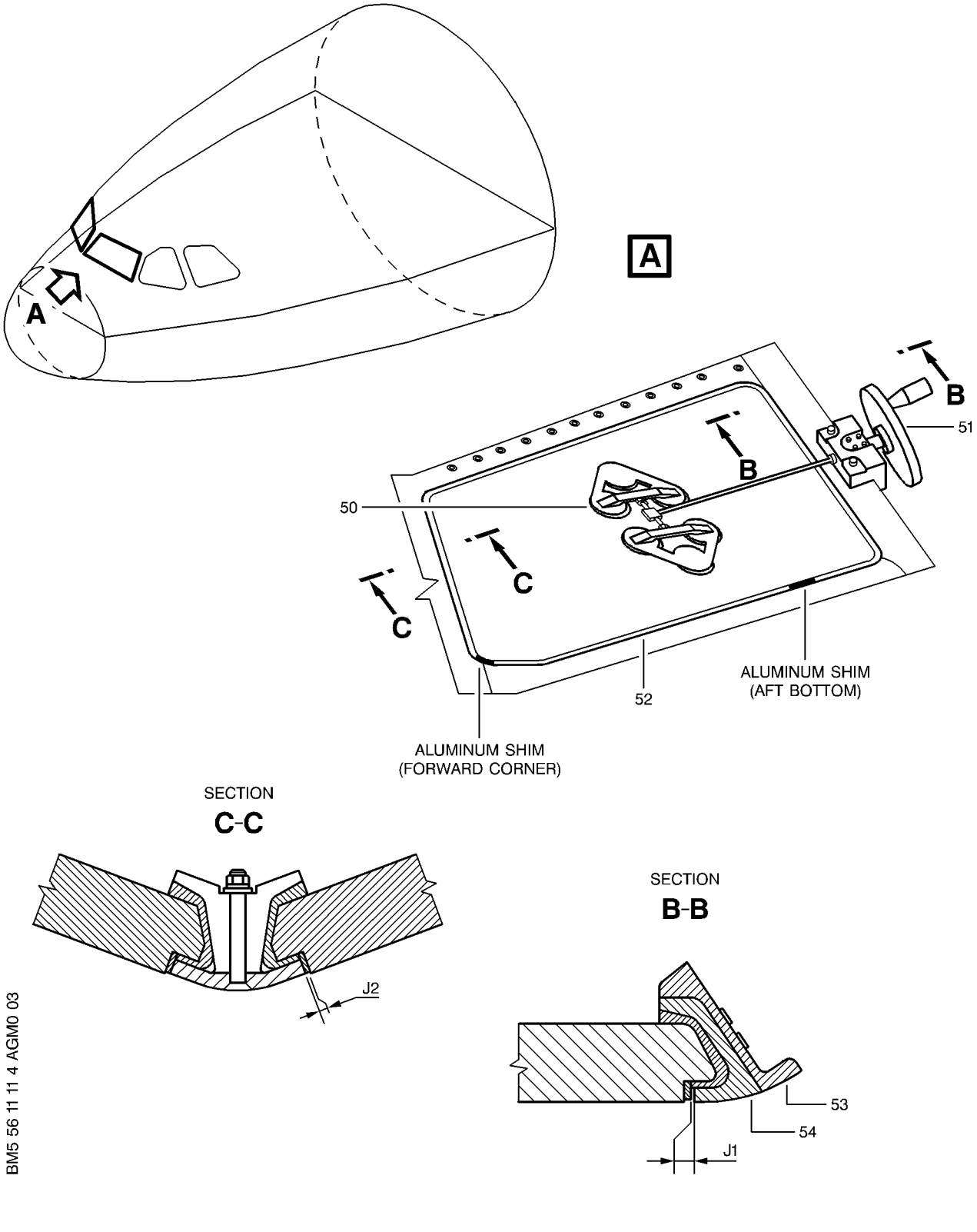
(Ref. Fig. 401)
Item 2 = 2 countersunk head bolts, total length = 34.9 mm (1.37 in.)
Item 3 = 6 countersunk head bolts, total length = 66.7 mm (2.62 in.)
Item 6 = 1 countersunk head bolt, total length = 59.7 mm (2.35 in.)
Item 10 = 10 hex-head bolts, length under head = 32.5 mm (1.27 in.)
Item 11 = 4 countersunk head bolts, total length = 47.6 mm (1.87 in.)
Item 16 = 7 Hex-head bolts, length under head = 37.3 mm (1.47 in.)
Item 19 = 2 countersunk head bolts, total length = 69.8 mm (2.75 in.)
Item 21 = 6 countersunk head bolts, total length = 58.7 mm (2.31 in.)

**ON A/C 002-200,

(Ref. Fig. 402)
Item 2 = 2 countersunk head bolts, total length = 33.3 mm (1.31 in.)
Item 3 = 6 countersunk head bolts, total length = 65.5 mm (2.58 in.)
Item 6 = 1 countersunk head bolt, total length = 59.7 mm (2.35 in.)
Item 10 = 10 hex-head bolts, length under head = 30.9 mm (1.21 in.)
Item 11 = 4 countersunk head bolts, total length = 46 mm (1.81 in.)
Item 16 = 7 Hex-head bolts, length under head = 35.7 mm (1.40 in.)
Item 19 = 2 countersunk head bolts, total length = 68.7 mm (2.70 in.)
Item 21 = 6 countersunk head bolts, total length = 57.1 mm (2.25 in.)

**ON A/C 001-002,

(b)If during installation of attaching bolts problems occur due to bolt overlength, replace bolts as follows:
Replace following attaching bolts by shorter bolts:
Item 2 = 34.9 mm (1.37 in.) by 33.3 mm (1.31 in.)
Item 3 = 66.7 mm (2.62 in.) by 65.5 mm (2.58 in.)
Item 10 = 32.5 mm (1.27 in.) by 30.9 mm (1.21 in.)
Item 11 = 47.6 mm (1.87 in.) by 46 mm (1.81 in.)
Item 16 = 37.3 mm (1.47 in.) by 35.7 mm (1.4 in.)
Item 19 = 69.8 mm (2.75 in.) by 68.7 mm (2.7 in.)
Item 21 = 58.7 mm (2.31 in.) by 57.1 mm (2.25 in.)



Windshield Panel
Figure 405

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**ON A/C ALL

(c)Put protections in position on the glareshield to prevent unwanted application of cleaning material and sealant.
(d)Put the windshield panel (52) in position in its housing:
(Ref. Fig. 405)
You must put two aluminum or plastic shims without sharp edges (50 mm (1.9685 in.) X 2 mm (0.0787 in.) X 150 mm (5.9055 in.)) in position between the windshield and the aircraft bottom frame. One shim must be in the forward bottom corner and the second in the aft bottom area. These shims help to put the windshield in the vertical axis.
NOTE : Two persons are necessary to install the windshield panel:
- one person out of the aircraft to hold the windshield panel,
- a second person in the aircraft, with one arm through the sliding window and one hand on the inner face of the windshield panel to put it in position in the 'U' lateral frame (54).

(e)Check from the flight compartment that the three sealing lips of the windshield are in contact all around the frame.
(f)Put the installation tool R/I FRONT WINDOW TOOL (98F56103500000) in position on the side post (53).
(g)Put the suction cups (50) on the outer face of the windshield (52).
(h)Move the windshield (52) into the 'U' lateral frame. To do this, turn the wheel (51) and adjust it laterally. Do a check of the clearance between the windshield seal and the aircraft structure (a clearance of 0 mm (0.0000 in.) to 1.5 mm (0.0590 in.) around all of the windshield).

(4)Apply a layer of SEALANT (Material No. 09-019) on the frame structure, on the mating surfaces between the retainers and the frame structure.
(5)Remove the forward bottom aluminum shim.
(6)Install the front retainer (20), the compass calibration card holder (5) and the compass mounting bracket (4) with the bolts (21) and (19), the washers (24), the nuts (23) and the bolts (3). Install the bolt (6) with the nut (8) and install the bolts (2).
(7)Adjustment of the Windshield Panel (Ref. Fig. 405)
CAUTION : DO NOT USE SHARP TOOLS OR OBJECTS TO REMOVE THE WINDSHIELD. DO NOT USE A LEVER AGAINST THE EDGE OF THE WINDSHIELD. IF YOU USE SHARP TOOLS, YOU WILL CAUSE DAMAGE TO THE WINDSHIELD.
CAUTION : DO NOT USE A SUCTION CUP TO HOLD THE INNER SURFACE OF THE WINDSHIELD PANEL IF THE PANEL HAS A SOFT (SELF HEALING) LINER (SUPPLIER SPS). THE SUCTION CUP WILL CAUSE DAMAGE TO THE SOFT LINER.

(a)Adjust the windshield panel laterally to get clearance J1 of 0.75 -0.75 +0.75 mm (0.0295 -0.0295 +0.0295 in.) between the windshield panel and the 'U' lateral frame and J2 between the windshield panel and the front retainer.
R (b)Remove the R/I FRONT WINDOW TOOL (98F56103500000) and the aft bottom aluminum shim.

(8)Install the lower retainer (18) and the washers (15) with the bolts (16). Install and seal according to sections F the washer (12), the rest block (14), the shim (25), the washers (13) and the bolts (11) using Material

No. 09-015. Do not tighten.

(9)Install the upper retainer (22) and the washers (9) with the bolts (10). Do not tighten.

(10)Tighten the bolts progressively and alternately.
TORQUE to between 1.2 and 1.5 m.daN (106 and 133 lbf.in.).

(11)Check that the upper retainer to panel into wind value is between 0.5 and 1.1 mm (0.02 and 0.043 in.).

(12)Flush off the countersinks and bolt heads of the upper (22) and lower (18) retainers with Sealants (Material No. 09-016 or Material No. 09-053).

NOTE : If you use PR1436GB-ND1/2 at 23°, the application time is 1/2 hour and the cure time is 24 hours. If you use PR1436GB2-NA at 23°, the application time is 2 hours and the cure time is 30 hours. If you use PR1436GB4-NA at 23°, the application time is 4 hours and the cure time is 40 hours. If you use DAPCO 72 at 23°, the application time is 1/4 hour and the cure time is 2 1/2 hours.

(13)Apply a bead of Sealants (Material No. 09-016 or Material No. 09-053) at the intersection area between:

(a)the frame structure and the lower retainer (18),

(b)the frame structure and the upper retainer (22),

(c)the front retainer (20) and the upper (22) and lower (18) retainers.

NOTE : If you use PR1436GB-ND1/2 at 23°, the application time is 1/2 hour and the cure time is 24 hours. If you use PR1436GB2-NA at 23°, the application time is 2 hours and the cure time is 30 hours. If you use PR1436GB4-NA at 23°, the application time is 4 hours and the cure time is 40 hours. If you use DAPCO 72 at 23°, the application time is 1/4 hour and the cure time is 2 1/2 hours.

(14)If the sealant cure time is not sufficient before the aircraft takes off, do the procedure below:

CAUTION : BEFORE YOU APPLY THE TAPE, MAKE SURE THAT THE SEALANT IS NOT TACKY. IF IT IS TACKY, THE TAPE CAN CAUSE DAMAGE TO THE SEALANT.

CAUTION : WHEN YOU APPLY THE TAPE, MAKE SURE THAT THERE ARE NO BUBBLES. THIS WILL HELP TO PREVENT THE REMOVAL OF THE TAPE DURING THE FLIGHT.

(a)Put a strip of Bonding and Adhesive Compounds (Material No. 08-052) on the intersection areas.

NOTE : If you use PR1436GB-ND1/2 at 23°, the sealant is not tacky after 10 hours. If you use PR1436GB2-NA at 23°, the sealant is not tacky after 16 hours. If you use PR1436GB4-NA at 23°, the sealant is not tacky after 28 hours. If you use DAPCO 72 at 23°, the sealant is not tacky after 40 minutes.

(b)Do a visual check of the intersection areas between each flight.

(c)Remove the Bonding and Adhesive Compounds (Material No. 08-052) after the sealant cure time.

NOTE : During the flight, temperatures are under 10° and the sealants do not dry. The sealant cure times given above do not

include the flight hours.
(15)Connect the electrical connector (17) to the plug (44).
(16)Tighten the electrical connector (17).
(17)Remove the panel protective films.

F. Test
(1)Remove the safety clips and tags and close the circuit breakers 1DG, 2DG, 3DG, 4DG, 5DG and 6DG.
(2)Perform the windshield panel anti-icing and de-fogging operational test (Ref. 30-42-00, P. Block 501).

G. Close-Up
(1)Touch up paint finish if necessary (Mat. No. 13-002 and 16-001).
(2)Close the sliding windows.
(3)Install the windshield spray nozzle (Ref. 30-45-54, P. Block 401).
(4)Install the windshield wiper arm (Ref. 30-45-14, P. Block 401).
(5)Install the standby compass (Ref. 34-28-21, P. Block 401) if steps 2.B.(5) and 2.C.(5) have been performed.
(6)Install the electrical connector protective plate.
(7)Clean the panel surface with a solution containing 1/3 of Material No. 10-002 and 2/3 of water. Wipe with a clean dry lint-free cloth.
(8)Remove access platform.

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WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE OPENED, SAFETIED AND TAGGED.

1. Inspection of Windshield Panels

A. Reason for the Job
Visual check of windshield panels to make certain that defects, if any, are within quoted tolerances.

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform 5.7 m (18 ft. 8 in.)
(2)Material No. 11-010	Cleaning Agents (Ref. 20-31-00)
Referenced Procedure - 561000, P. Block 601	Flight Compartment

C. Job Set-Up
(1)Position access platform.
(2)Open, safety and tag the following circuit breakers :

PANEL	SERVICE	IDENT.	LOCATION
101VU	WINDOW/HEAT	1DG	GEN1/C20
101VU	WINDOW/HEAT	2DG	GEN2/C20
132VU	ANTI-ICE/WINDOWHEAT/L/115 VAC/REF	3DG	L65
132VU	ANTI-ICE/WINDOW HEAT/R/115 VAC/REF	4DG	L69
132VU	ANTI-ICE/WINDOW/HEAT/L/REG & WARN	5DG	P67
132VU	ANTI-ICE/WINDOW/HEAT/L/REG & WARN	6DG	N66

(3)Position access platform in front of windshield.
(4)Clean panels with a solution containing 1/3 of Material No.11-010 and 2/3 of water. Wipe with a clean dry cloth.
(5)Examine airtight seal (absence of crazing and blistering).
(6)Examine frame in area of seals (absence of distortion).

D. Procedure
(1)Inspection of the windshield
NOTE : "Impaired" : in inspection tables, the word "impaired" refers to visibility. Visibility is "impaired" when defects have an effect on visibility.
If visibility is "impaired", you must replace the windshield panel.

(a)Inspect the windshields
1 Cracks (Ref. Fig. 601)

2 Scratches (Ref. Fig. 602)
NOTE : If you see scratches, you must do a check of the depth of the scratches :
- with your finger nail or
- with the MITUTOYO surface tester (Ref. 56-10-00, P. Block 601).

NOTE : There are two methods to help classify the depth of the damage. The fingernail method quickly and approximately measures the damage and the MITUTOYO surface tester method accurately measures the depth of the damage. If the MITUTOYO surface tester is available, you must use the more accurate measurement to classify the damage.

3 Chips (Ref. Fig. 603)
4 Delamination (Ref. Fig. 604)
5 Interlayer microflakes (Ref. Fig. 605)
6 Bubbles (Ref. Fig. 605)
7 Discoloration (Ref. Fig. 606)
8 Burn spot (Ref. Fig. 607)
9 Burning (Ref. Fig. 607)
10 Transparency (Ref. Fig. 607)
R 11 Heating film cracking (Ref. Fig. 608)

E. Close-Up
(1)Remove safety clips and tags and close circuit breakers : 1DG, 2DG, 3DG, 4DG, 5DG and 6DG.
(2)Remove the access platforms.

2. Inspection of Front Windshield Weather Seal

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform 5.7 m (18 ft. 8 in.)
Referenced Procedure - 56-11-11, P. Block 801	Windshield Panels - Approved Repairs

B. Job Set-Up
(1)Position access platform in front of windshield.

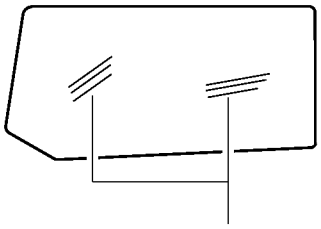
C. Procedure
(Ref. Fig. 609)
(1)Do a detailed visual inspection of the weather seal from the outside.
(a)For the PPG windshield, except for PPG windshield with a stainless steel z section (P/N NP-175201-3, NP-175201-4, NP-175201-5 and NP-175201-6), make sure that there are no cracks, erosion and that you cannot see the outboard glass edge.
(b)For the SPS windshield, except for SPS windshield with a stainless steel z section (P/N SPSA 340-1-4 and SPSA 340-2-4), make sure that there are no cracks, erosion and that you cannot see the SILIRITE composite material.

DESCRIPTION OF DEFECT	CORRECTIVE ACTIONS
CRACKS LINE TYPE DEFECTS OR CRISS CROSS THROUGH THE DEPTH OF PLY OR PANE OF THE WINDSHIELD PANEL	OUTER PLY TEN FLIGHT LEGS AUTHORIZED EXCEPT FOR PILKINGTON (P/N 06052 AND 06053) AND SPS TGA 300 SERIES WINDSHIELDS (ONE FLIGHT LEG AUTHORIZED) ON THE CONDITION THAT: - THE AIRCRAFT IS NOT FLOWN IN ANY AREA OF KNOWN ICING CONDITIONS - THE VISIBILITY IS NOT IMPAIRED - THE OTHER WINDSHIELD PANEL IS SERVICEABLE DO NOT APPLY ELECTRICAL HEAT TO CRACKED WINDSHIELD IF THERE IS ARCING
	MIDDLE INNER PLY MIDDLE OR INNER PLY OR BOTH PLIES CRACKED : NOT ACCEPTABLE

BM5 56 11 11 6 ACC0 06

Windshield - Permissible Damage
Figure 601

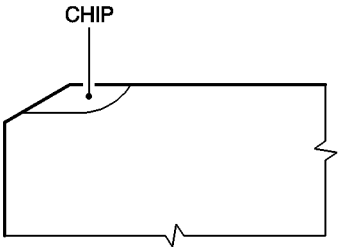
R

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
SCRATCHES LINE TYPE DEFECTS IN THE EXTERNAL SURFACE OF THE WINDSHIELD  	OUTER PLY ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED INNER PLY ACCEPTABLE: - IF YOU CANNOT FEEL THE SCRATCHES WHEN YOU TOUCH THE WINDSHIELD WITH YOUR FINGER NAIL OR - IF THE DEPTH OF THE SCRATCHES MEASURED WITH THE MITUTOYO SURFACE TESTER SJ201 IS LESS THAN 0.05mm (0.002in.) (REF. 56-10-00, P. BLOCK 601). NOT ACCEPTABLE: - IF YOU CAN FEEL THE SCRATCHES WHEN YOU TOUCH WINDSHIELD WITH YOUR FINGER NAIL OR - IF THE DEPTH OF THE SCRATCHES MEASURED WITH THE MITUTOYO SURFACE TESTER SJ201 IS MORE THAN 0.05mm (0.002in.) (REF. 56-10-00, P. BLOCK 601). NOTE: THERE ARE TWO METHODS TO HELP CLASSIFY THE DEPTH OF THE DAMAGE. THE FINGERNAIL METHOD QUICKLY AND APPROXIMATELY MEASURES THE DAMAGE AND THE MITUTOYO SURFACE TESTER METHOD ACCURATELY MEASURES THE DEPTH OF THE DAMAGE. IF THE MITUTOYO SURFACE TESTER IS AVAILABLE, YOU MUST USE THE MORE ACCURATE MEASUREMENT TO CLASSIFY THE DAMAGE.

BM5 56 11 11 6 ADD0 11

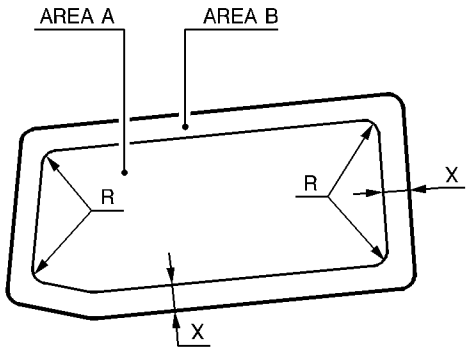
R

Windshield - Permissible Damage
Figure 602

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
CHIPS FLAKES OF GLASS BROKEN FROM THE SURFACE AND THE EDGES OF THE WINDSHIELD PANEL DETAIL OF A CHIP  	OUTER PLY ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED
	INNER PLY NOT ACCEPTABLE
	MIDDLE PLY NOT ACCEPTABLE

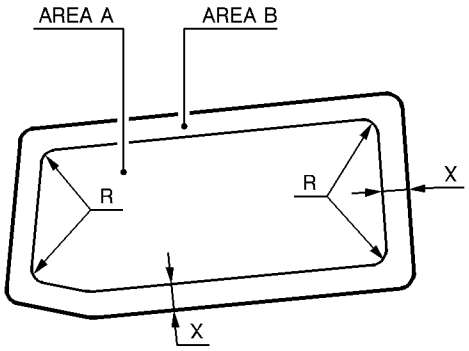
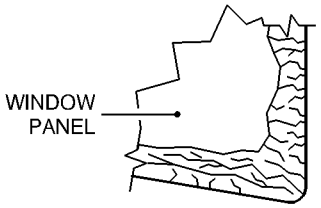
BM5 56 11 11 6 ADV0 05

Windshield - Permissible Damage
Figure 603

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
DELAMINATION SEPARATION OF GLASS FROM THE ADJACENT VINYL INTERLAYER OCCURS MOST FREQUENTLY AROUND EDGES,SENSORS AND IN UNHEATED AREAS. AREA WITH DELAMINATION CAN BE CLEAR BUT IT WILL BECOME CLOUDY IF MOIST HAS GONE INTO IT. DELAMINATION LIMITS  X = 76.2mm (3in.) R = 76.2mm (3in.)	MIDDLE/OUTER/INNER PLY AREA A: NOT ACCEPTABLE AREA B: ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED

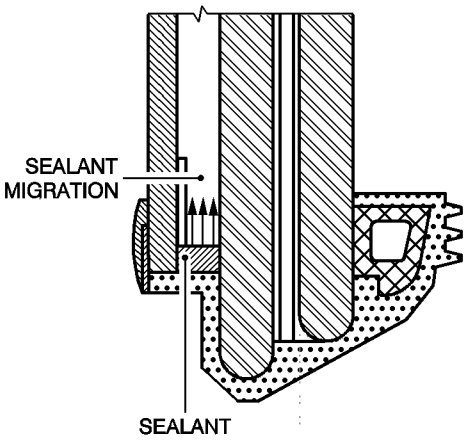
BM5 56 11 11 6 AQR0 06

Windshield - Permissible Damage
Figure 604

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
INTERLAYER MICROFLAKES MICROFLAKES ARE CHEMICAL REACTIONS IN THE PERIPHERY OF THE INTERLAYER CAUSED BY MOISTURE INGRESS AND WINDOW AGEING INTERLAYER MICROFLAKES LIMITS  X = 76.2mm (3in.) R = 76.2mm (3in.) DETAIL OF MICROFLAKES  	INNER/MIDDLE/OUTER PLY AREA A: NOT ACCEPTABLE AREA B: ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED NOTE : -MICROFLAKES ONLY OCCUR IN THE INTERLAYERS -ANY EQUIVALENT DAMAGE IN THE GLASS PLIES WILL CAUSE IMMEDIATE BREAKAGE OF THE PLY
BUBBLES SMALL BUBBLES CAUSED BY GAS LIBERATED WHEN THE VINYL BECOMES TOO HOT THE BUBBLES DO NOT DECREASE THE STRUCTURAL STRENGH	INNER / MIDDLE / OUTER PLY ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED

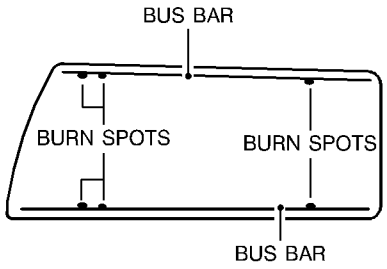
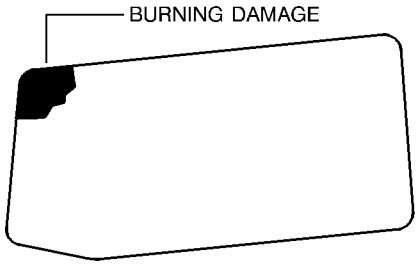
BM5 56 11 11 6 AWR0 06

Windshield - Permissible Damage
Figure 605

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
DISCOLORATION THE DISCOLORATION IS CAUSED BY : - CARBON DISCOLORATION CAN BE REFLECTION FROM THE BUS BAR AND THE CONDUCTIVE FILM THIS REFLECTION CHANGES COLOR LIKE A RAINBOW WHEN YOU LOOK AT IT FROM AN OBLIQUE ANGLE - MIGRATION OF BROWN SEALANT TO THE PERIPHERY OF THE OUTER INTERLAYER WHICH CAN EXTEND ON A WIDTH OF 10mm (0.39in.) TO 20mm (0.78in.) AT THE PERIPHERY OF THE WINDOW PANEL SEALANT MIGRATION  	ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED

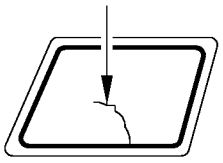
BM5 56 11 11 6 ATR0 01

Windshield - Permissible Damage
Figure 606

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
BURN SPOT - BURN SPOT IN THE BUS BAR AREA BURN SPOT IN THE BUS BAR AREA IS CAUSED BY A ARCING CONSECUTIVE TO A BUS BAR DAMAGE BUS BAR LOCATION  	ACCEPTABLE IF THE LENGTH OF ALL THE BURN SPOTS ADDED TOGETHER ON ONE BUS BAR IS NOT MORE THAN 200mm(7.874in.) IF THE TOTAL LENGTH IS MORE THAN 200mm(7.874in.): - STOP THE WINDSHIELD HEATING - DO NOT OPERATE THE AIRCRAFT IN AN AREA OF KNOW ICING CONDITIONS
BURNING THE BURNING IS CAUSED BY FREQUENT HIGHT TRMPERATURE MAKING THE INTERLAYER TURN BROWNISH  	ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED
TRANSPARENCY HALOS ON THE SURFACE OF THE WINDSHIELD PANEL CAN MAKE THEM LESS TRANSPARENT	ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED
RAIN REPELLANT FLUID RESIDUE DISCOLORATION OF THE EXTERNAL SURFACE OF THE WINDOWS	CLEAN THE EXTERNAL SURFACE OF THE WINDSHIELD PANEL

BM5 56 11 11 6 AST0 03

Windshield - Permissible Damage
Figure 607

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
HEATING FILM CRACKING HEATING FILM LOCATED BETWEEN THE OUTER PLY AND THE MIDDLE PLY OF THE WINDOW. HEATING FILM CRACKING LEADS TO THE ELECTRICAL FAILURE OF THE HEATING SYSTEM BUT DOES NOT AFFECT STRUCTURAL INTEGRITY. HEATING FILM CRACKING 	MIDDLE/OUTER/INNER PLY AIRCRAFT DISPATCH AUTHORIZED PROVIDED THAT : - THE AIRCRAFT IS NOT FLOWN IN ANY AREA OF KNOWN ICING CONDITIONS - THE VISIBILITY IS NOT IMPAIRED - THE OTHER WINDSHIELD PANEL IS SERVICEABLE. NOTE: - HEATING FILM CRACKING CAN BE CONFUSED WITH A MIDDLE PLY CRACKING.

BM5 56 11 11 6 AFM0 00

Windshield - Permissible Damage
Figure 608

(c)For the PPG windshield with a stainless steel z section (P/N NP-175201-3, NP-175201-4, NP-175201-5 and NP-175201-6), make sure that there are no cracks, erosion and that you cannot see the z section.

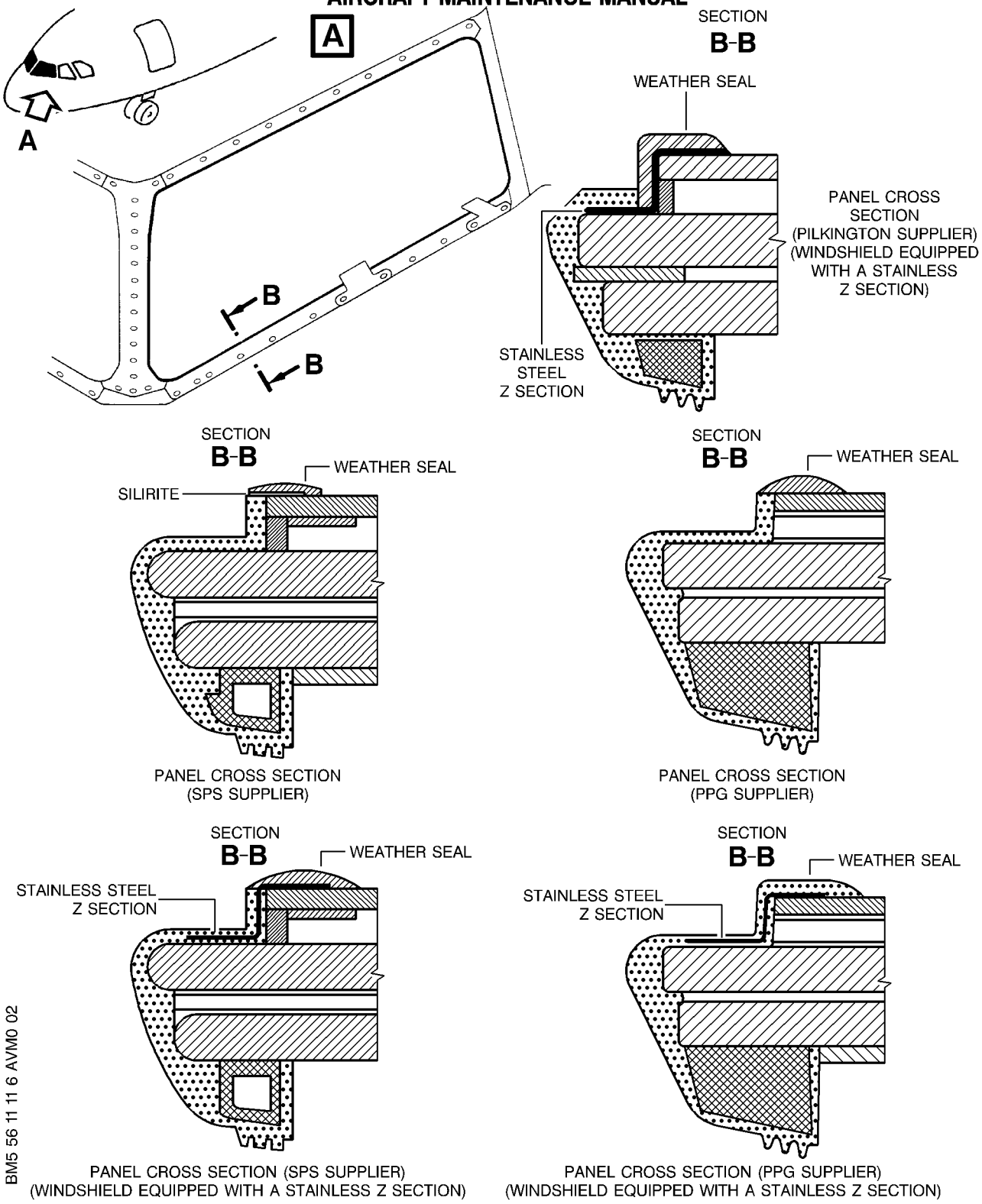
(d)For the SPS windshield with a stainless steel z section (P/N SPSA 340-1-4 and SPSA 340-2-4), make sure that there are no cracks, erosion and that you cannot see the z section.

(e)For the PILKINGTON windshield with a stainless steel z section (P/N 06052 and 06053), make sure that there are no cracks, erosion and that you cannot see the z section.

(2)If you find damage, repair the weather seal (Ref. 56-11-11, P. Block 801).

D. Close-Up

(1)Remove access platform.



Windshield Weather Seal
Figure 609

WINDSHIELD PANELS - CLEANING

WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE OPENED, SAFETIED AND TAGGED.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 5.7 m (18 ft. 8 in.)
B.	Sponge
C.	Lint-Free Cloth
D.	Chamois Leather
E. Material Cif Ammoniacal	Societe LEVER 55 Avenue George V 75008 PARIS (FRANCE)
F. Material Perspex 2	Mr. Peter MENSHIK 5253 LINDLAR (WEST GERMANY)
G. Material Decrassol	Societe MAGOT - PARQUET NET 1 a 7 rue des Pres 91570 BIEVRES (FRANCE)
H. Material No. 10-002	Anti Icing and De-Icing Materials (Ref. 20-31-00)
R or	
R	Aviation Glass Cleaner (AMS 1534A) and
R	18" X 10" Cheesecloth (Hermitex 300-18)

2. Procedure

A. Job Set-Up
(1)Position access platform.
(2)Lift windshield wipers.
R (3)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
101VU	WINDOW/HEAT	1DG	GEN1/C20
101VU	WINDOW/HEAT	2DG	GEN2/C20
132VU	ANTI/ICE/WINDOW/HEAT/L/115VAC/REF	3DG	L65
132VU	ANTI/ICE/WINDOW/HEAT/R/115VAC/REF	4DG	L69
132VU	ANTI/ICE/WINDOW/HEAT/L/REG & WARN	5DG	P67
132VU	ANTI/ICE/WINDOW/HEAT R/REG & WARN	6DG	N66

B. Cleaning
(1)Normal
Clean panel surface with a sponge and a solution containing 1/3 of Material No. 10-002 and 2/3 of water or Aviation Glass Cleaner (AMS 1534A) and 18" X 10" Cheesecloth (Hermitex 300-18).
Wipe with chamois leather or a clean dry cloth.
(2)With rain repellent residues on windshield :
In case of inadvertent use of rain repellent on dry windshield, the thin coat formed by undiluted residue must be removed using one of the following materials : cif ammoniacal, perspex or decrassol.
Perform normal cleaning.

C. Close-Up
(1)Check wiper and replace if necessary.
(2)Put back wiper in position.
R (3)Remove safety clips and tags and close circuit breakers 1DG, 2DG,
R 3DG, 4DG, 5DG and 6DG.
R (4)Remove access platform.

R WINDSHIELD PANELS - APPROVED REPAIRS

R

WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE OPENED, SAFETIED AND TAGGED.

WARNING : USE SOLVENTS/CLEANING AGENTS, SEALANTS AND OTHER SPECIAL MATERIALS ONLY WITH A GOOD FLOW OF AIR THROUGH THE WORK AREA. THESE MATERIALS ARE POISONOUS AND FLAMMABLE AND SKIN IRRITANTS. OBEY THE MANUFACTURERS INSTRUCTIONS. PUT ON PROTECTIVE CLOTHING. DO NOT GET THEM IN YOUR MOUTH. DO NOT SMOKE. DO NOT BREATHE THE GAS. GET MEDICAL HELP IF YOUR SKIN OR EYES BECOME IRRITATED.

1. Reason for the Job

The windscreen weather seals can become eroded in service by the action of airborne water, ice or dust particles, particularly along the top and bottom sills. Deterioration of the moisture seal may allow water to pass into the windscreen at the glass/seal interface, which could result in damage to the windscreen.

2. Equipment and Materials

	ITEM	DESIGNATION
	A.	Access Platform 5.7m (18 ft.8 in.)
	B.	Circuit Breaker Safety Clips
	C. 98D56103003000	Weather Seal Spatula
	D. Material No. 08-052	Bonding and Adhesive Compounds (Ref. 20-31-00)
	E. Material No. 09-015	Sealants (Ref. 20-31-00)
R	F. PR1425B	Sealant (CPN 4005756)
R	G. PR1784B1/2	Sealant
R	H. PR186	Adhesion promoter
R	J. Material No. 09-045	Sealants (Ref. 20-31-00)
R	K. Material No. 10-002	Anti-Icing and De-Icing Materials (Ref. 20-31-00)
R	L. Material No. 11-003	Cleaning Agents (Ref. 20-31-00)
R	M. Material No. 19-003	Miscellaneous (Ref. 20-31-00)
	Referenced Procedure	
	- 30-45-14, P. Block 401	Wiper Arm
	- 56-11-11, P. Block 701	Windshield Panels - Cleaning

3. Procedure

A. Job Set-Up

(1)Position access platform.

(2)Remove windshield wiper arm (Ref. 30-45-14, P. Block 401).

(3)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
101VU	WINDOW/HEAT	1DG	GEN1/C20
101VU	WINDOW/HEAT	2DG	GEN2/C20
132VU	ANTI/ICE/WINDOW/HEAT/L/115VAC/REF	3DG	L65
132VU	ANTI/ICE/WINDOW/HEAT/R/115VAC/REF	4DG	L69
132VU	ANTI/ICE/WINDOW/HEAT/L/REG & WARN	5DG	P67
132VU	ANTI/ICE/WINDOW/HEAT/R/REG & WARN	6DG	N66

B. Repair of Windshield Weather Seal

WARNING : USE SOLVENTS/CLEANING AGENTS, SEALANTS AND OTHER SPECIAL MATERIALS ONLY WITH A GOOD FLOW OF AIR THROUGH THE WORK AREA. THESE MATERIALS ARE POISONOUS AND FLAMMABLE AND SKIN IRRITANTS. OBEY THE MANUFACTURERS INSTRUCTIONS. PUT ON PROTECTIVE CLOTHING. DO NOT GET THEM IN YOUR MOUTH. DO NOT SMOKE. DO NOT BREATHE THE GAS. GET MEDICAL HELP IF YOUR SKIN OR EYES BECOME IRRITATED.

CAUTION : DO NOT REMOVE SEALANT BELOW THE LEVEL OF THE GLASS SURFACE. DO NOT INSERT A KNIFE OR ANY OTHER OBJECT BELOW THE LEVEL OF THE GLASS SURFACE. ELECTRICAL CABLES RUN IMMEDIATELY BELOW THE SEAL.

NOTE : The function of the sealant is to make sure there is good aerodynamic flow and to seal the area from water intrusion.
- If inclement weather conditions such as rain or snow exist, which may result in moisture entrapment during the sealing operations, it is permissible to defer the sealant application for a period not to exceed two weeks. It is desirable to have the sealant application completed at the first gateway with suitable environmental conditions.
- Put a strip of speed tape over all unsealed areas before departure.

(Ref. Fig. 801)

(1)Remove sealing compound from bolts (4).

(2)Remove bolts (4). Remove and retain washers (1, 3) and lift-off and rest blocks (2, 5) for bolts (4).

(3)Check seal for erosion, cracking and adhesion to the glass surface. Using a plastic scraper, remove all loose, cracked or perished sealant.

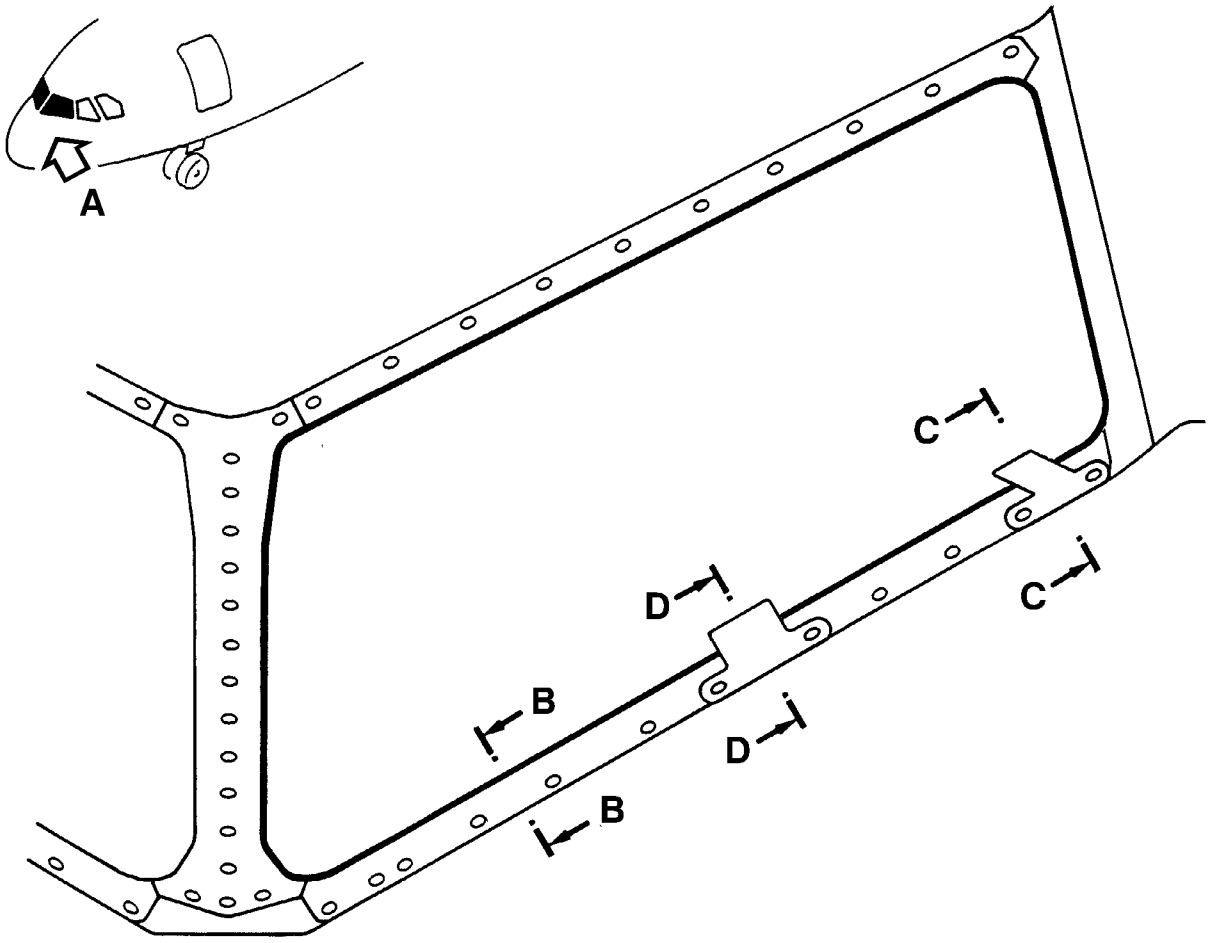
(4)Clean existing seal with Cleaning Agents (Material No. 11-003) and lint-free cloth (Material No. 19-003).

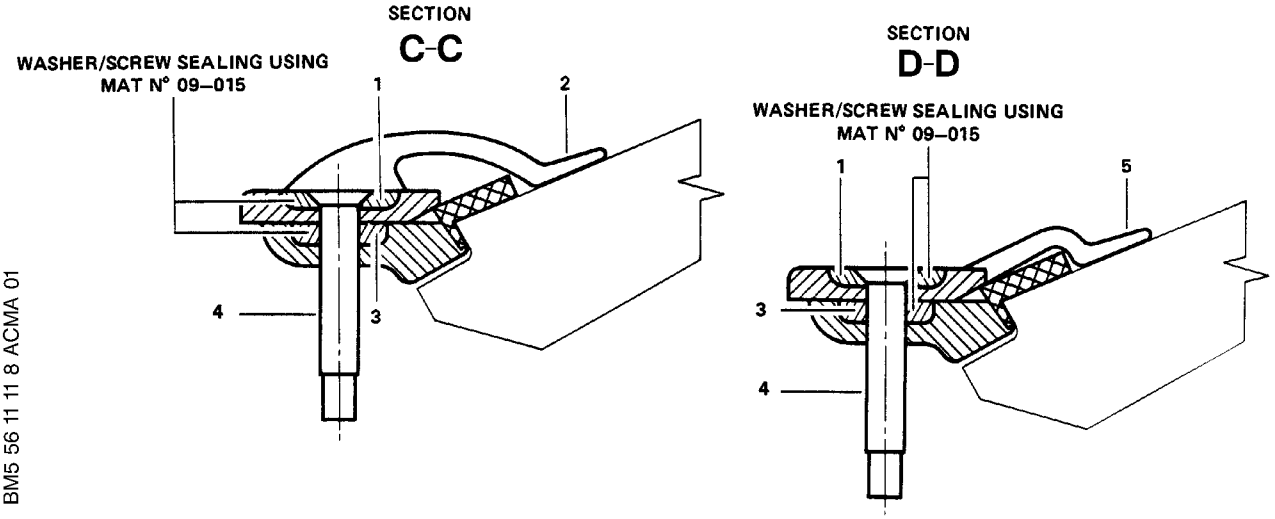
(5)Apply Adhesive Tape (Material No. 08-052) to the periphery of the glass panel.

(6)Apply Sealant (Material No. 09-045) on the windshield weather seal to get dimensions shown in figure:

NOTE : Sealant cure time and mixing ratio must be as per sealant kit manufacturer instructions.

R Airbus recommends use of PR1784B1/2 (chromate free)
R instead of PR1425B for these reasons:
R - The curing time is shorter: 4 hours for PR1784B1/2
R and 24 hours for PR1425B





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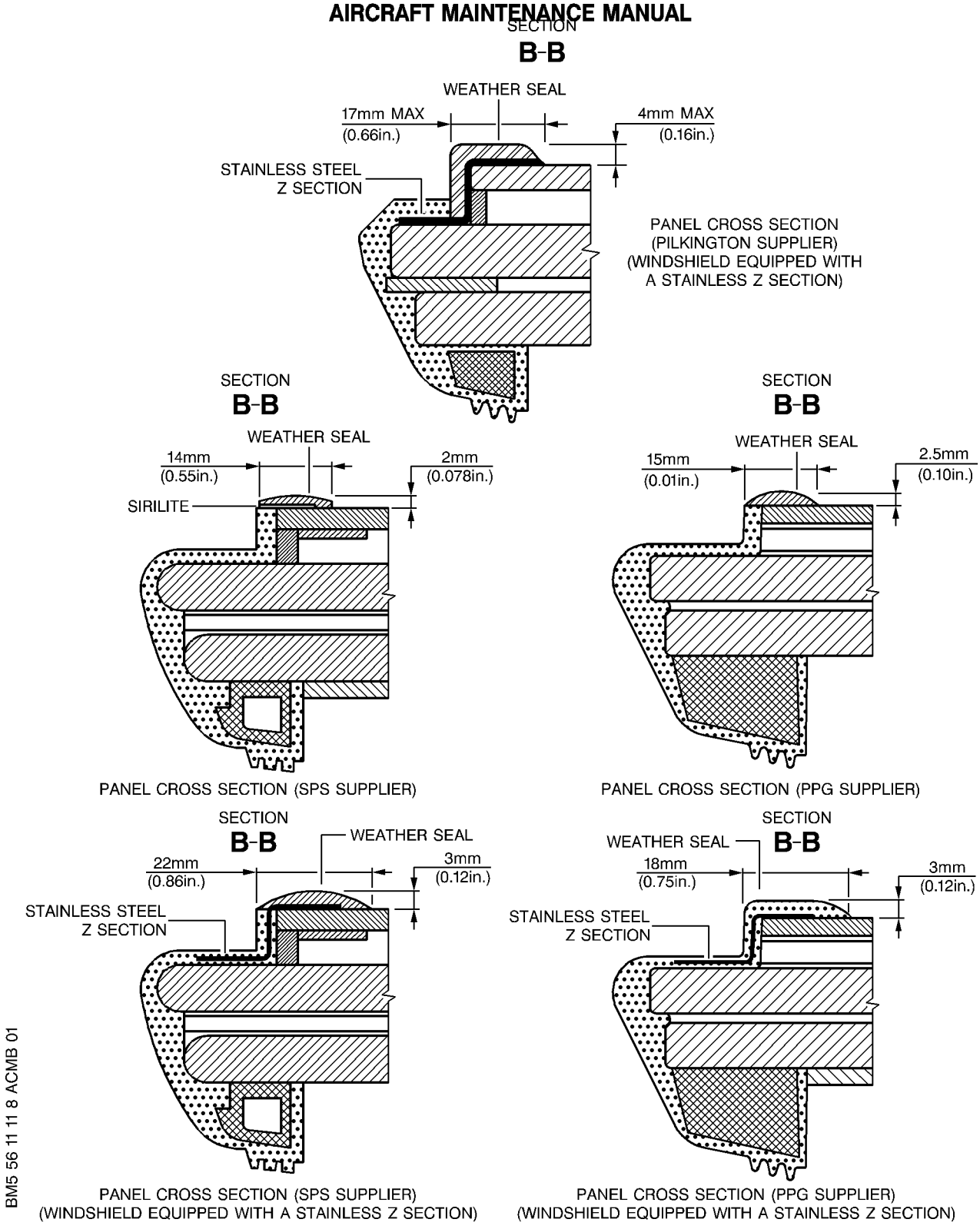
Windshield Weather Seal (Sheet 1/2)
Figure 801

R



BM5 56 11 11 8 ACMB 01

Windshield Weather Seal (Sheet 2/2)
Figure 801

R

R - The tack-free time is shorter: 3 hours for PR1784B1/2
R and 8 hours for PR1425B.

R It is necessary to apply adhesion promoter PR186 before you
R apply PR1784B1/2.

(a)For the PPG windshield, except for PPG windshield with a stainless steel z section (P/N NP-175201-3, NP-175201-4, NP-175201-5 and NP-175201-6), use the weather seal spatula (98D56103003204).

(b)For the SPS windshield, except for SPS windshield with a stainless steel z section (P/N SPSA 340-1-4 and SPSA 340-2-4), use the weather seal spatula (98D56103003200).

(c)For the PPG windshield with a stainless steel z section (P/N NP-175201-3, NP-175201-4, NP-175201-5 and NP-175201-6), use the weather seal spatula (98D56103003206).

(d)For the SPS windshield with a stainless steel z section (P/N SPSA 340-1-4 and SPSA 340-2-4), use the weather seal spatula (98D56103003202).

(e)For the PILKINGTON windshield with a stainless steel z section (P/N 06052 and 06053), use the weather seal spatula (98D56103003234).

(7)Remove the Adhesive Tape (Material No. 08-052).

(8)Clean the windshield (Ref. 56-11-11, P. Block 701).

(9)Install washers (3), lift-off block (2), rest block (5), washers (1) and bolts (4) using Material No.09-015. TORQUE to between 1.2 and 1.5 m.daN (106 and 133 lbf.in.).

C. Close-Up

(1)Remove safety clips and tags and close circuit breakers 1DG, 2DG, 3DG, 4DG, 5DG and 6DG.

(2)Install windshield wiper arm (Ref. 30-45-14, P. Block 401).

(3)Clean panel surface with a solution containing 1/3 of Material No.10-002 and 2/3 of water. Wipe with a clean dry lint-free cloth.

(4)Remove access platform.

FIXED SIDE WINDOW PANELS - REMOVAL/INSTALLATION

WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE OPENED, SAFETIED AND TAGGED.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 5.7 m (18 ft. 8 in.)
B.	Circuit Breaker Safety Clips
C. Material No. 05-001	Special Materials (Ref. 20-31-00)
R D. Material No. 10-002	Anti-Icing and De-Icing Materials (Ref. 20-31-00)
Referenced Procedures	
- 25-13-21, P. Block 401	Upper Sidewall Panels
- 30-42-00, P. Block 501	Windshield Panel Anti-Icing and Defogging

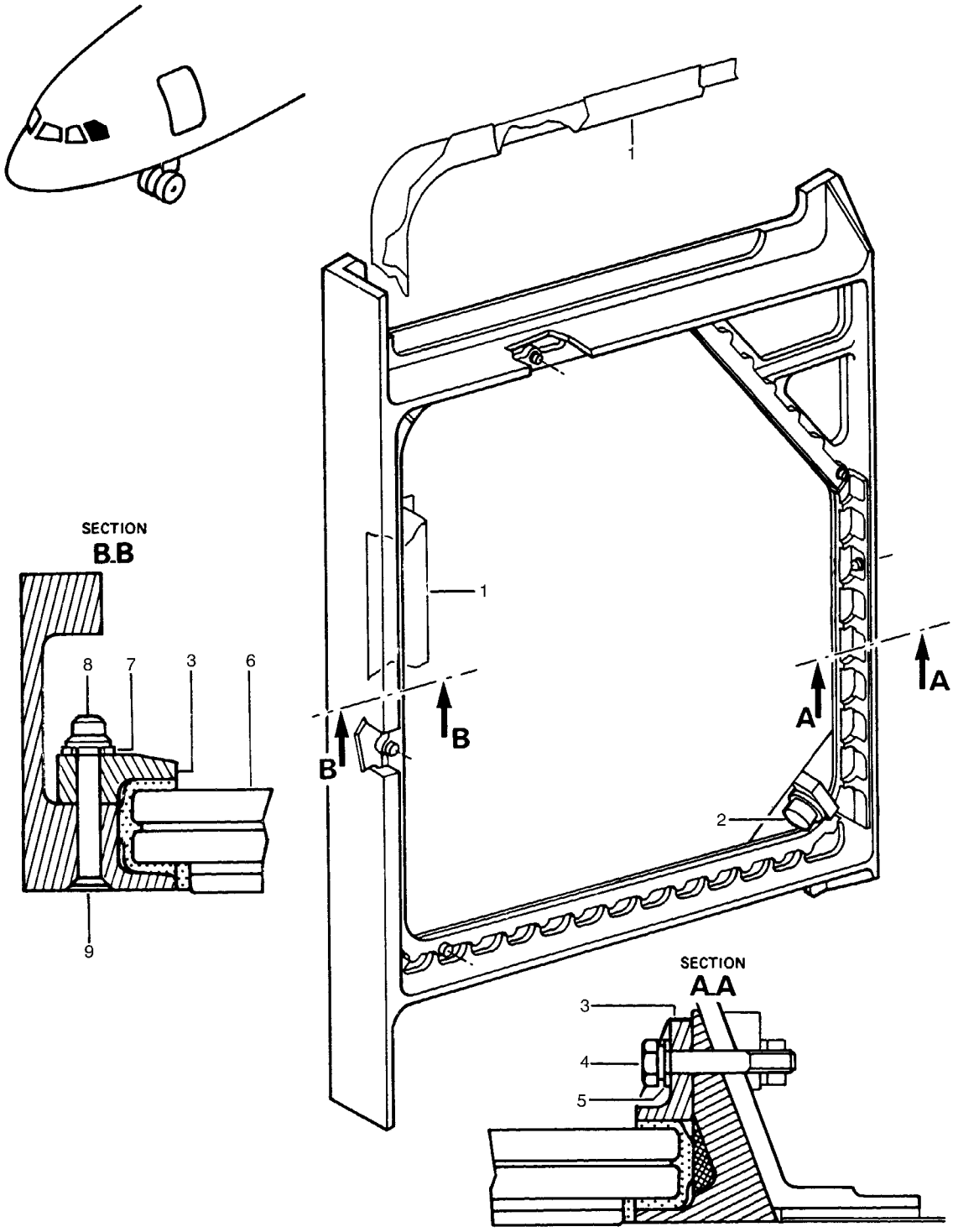
2. Procedure (Ref. Fig. 401)

A. Job Set-Up
(1)Position access platform.
(2)Place Captain's (First Officer's) seat in fully forward position.
(3)If necessary, close appropriate sliding side window panel assembly for access to panel to be removed.
(4)Remove frame trimming (1) (Ref. 25-13-21, P. Block 401).
(5)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
132VU	ANTI-ICE/WINDOW HEAT/L/115VAC/REF	3DG	324/L65
132VU	ANTI-ICE/WINDOW HEAT/R/115VAC/REF	4DG	324/L69
132VU	ANTI-ICE/WINDOW/HEAT/L/REG & WARN	5DG	321/P67
132VU	ANTI-ICE/WINDOW/HEAT/R/REG & WARN	6DG	322/N66
132VU	ANTI-ICE/WINDOW HEAT/L/SIDE WINDOW	7DG	324/L64
132VU	ANTI-ICE/WINDOW HEAT/R/SIDE WINDOW	8DG	324/L70

B. Removal
(1)Disconnect electrical connector (2).
(2)Slacken nuts (8) and bolts (4).
(3)Hold panel in position and remove:
(a)Bolts (4), retain washers (5).
(b)Nuts (8) and bolts (9), retain washers (7).
(c)The five retainers (3).
(4)Remove panel (6), complete with seal, towards interior of flight compartment.
(5)Clean frame assembly.

C. Preparation of Replacement Component
(1)Make certain that replacement panel is free from scratches and splintering caused by handling.



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Fixed Side Window Panel Assembly
Figure 401

(2)Check condition of electrical connector.
(3)Make certain that panel seal is free from crazing or cuts.
(4)Check that the window frame is in good condition, i.e free of dents, cracks, marks, scratches, deformations, etc.

D. Installation
(1)Coat panel seal with Special Materials (Material No. 05-001).
(2)Position panel equipped with seal in frame and check that seal is not distorted.
(3)Install retainers (3) with bolts (4), washers (5), bolts (9), washers (7) and nuts (8). Tighten bolts (4) and nuts (8) progressively.
(4)TORQUE nuts (8) and bolts (4) to between 0.65 and 0.80 m.daN (57.5 and 71.0 lbf.in.).

E. Close-Up
(1)Remove panel protective film.
(2)Connect electrical connector.
(3)Remove safety clips and tags and close circuit breakers 3DG, 4DG, 5DG, 6DG, 7DG and 8DG.
(4)Perform operational test of panel heating system (Ref. 30-42-00, P. Block 501).
(5)Install panel frame trimming (1) (Ref. 25-13-21, P. Block 401).
(6)Place Captain's (First Officer's) seat in fully aft position.
(7)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(8)Clean panel with a solution containing 1/3 of Material No. 10-002 and 2/3 of water. Wipe with a clean, dry lint-free cloth.
(9)Remove access platform.

WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE OPENED, SAFETIED AND TAGGED.

1. Inspection of Fixed Side Window Panels

A. Reason for the Job
Visual check of fixed panels to make certain that defects, if any, are within quoted tolerances.

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform 5.7 m (18 ft. 8 in.)
(2)	Adhesive Tape
R (3)Material No. 11-010	Cleaning Agents (Ref. 20-31-00)
Referenced Procedure	
- 561000, P. Block 601	Flight Compartment

C. Job Set-Up
(1)Position access platform.
R (2)Clean fixed panels with a solution containing 1/3 of Material No.11-010 and 2/3 of water. Wipe with a clean dry cloth.
(3)Examine airtight seal (absence of crazing and blistering).
(4)Examine frame in area of seals (absence of distortion).

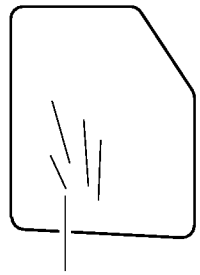
D. Procedure

(1)Inspection of the fixed window
NOTE : "Impaired" : in inspection tables, the word "impaired" refers to visibility. Visibility is "impaired" when defects have an effect on visibility.
If visibility is "impaired", you must replace the window panel.
(a)Inspect the fixed window for :
1 Cracks (Ref. Fig. 601)
2 Scratches (Ref. Fig. 602)
NOTE : if you see scratches, you must do a check of the depth of the scratches :
- with your finger nail or
- with the MITUTOYO surface tester (Ref. 56-10-00, P. Block 601).
3 Chips (Ref. Fig. 603)
4 Delamination (Ref. Fig. 604)
5 Discoloration (Ref. Fig. 605)
6 Burn spot (Ref. Fig. 606)
7 Transparency (Ref. Fig. 606)
8 Interlayer microflakes (Ref. Fig. 607)
9 Bubbles (Ref. Fig. 607)

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
CRACKS LINE TYPE DEFECTS OR CRISS CROSS TROUGH THE DEPTH OF THE PLY OF THE FIXED WINDOW	OUTER PLY ONLY ONE FLIGHT LEG AUTHORIZED PROVIDED THAT: -THE AIRCRAFT IS NOT FLOWN IN ANY AREA OF KNOWN ICING CONDITIONS -THE VISIBILITY IS NOT IMPAIRED -THE OTHER FIXED WINDOW IS SERVICEABLE DO NOT APPLY ELECTRICAL HEAT TO CRACKED FIXED WINDOW IF THERE IS ARCING
	MIDDLE/INNER PLY MIDDLE OR INNER PLY OR BOTH PLIES CRACKED NOT ACCEPTABLE

BM5 56 11 12 6 ACC0 04

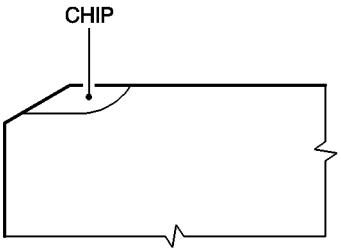
Fixed Window - Permissible Damage
Figure 601

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
SCRATCHES LINE TYPE DEFECTS IN THE EXTERNAL SURFACE OF THE FIXED WINDOW  SCRATCHES	OUTER PLY ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED INNER PLY ACCEPTABLE: – IF YOU CANNOT FEEL THE SCRATCHES WHEN YOU TOUCH THE FIXED WINDOW WITH YOUR FINGER NAIL OR – IF THE DEPTH OF THE SCRATCHES MEASURED WITH THE MITUTOYO SURFACE TESTER SJ201 IS LESS THAN 0.05mm (0.002in.) (REF. 56-10-00, P.BLOCK 601). NOT ACCEPTABLE: – IF YOU CAN FEEL THE SCRATCHES WHEN YOU TOUCH THE FIXED WINDOW WITH YOUR FINGER NAIL OR – IF THE DEPTH OF THE SCRATCHES MEASURED WITH THE MITUTOYO SURFACE TESTER SJ201 IS MORE THAN 0.05mm (0.002in) (REF. 56-10-00, P.BLOCK 601).

BM5 56 11 12 6 ACD0 08

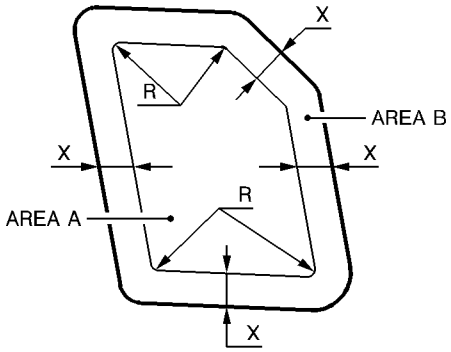
Fixed Window - Permissible Damage
Figure 602

R

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
CHIPS FLAKES OF GLASS BROKEN FROM THE SURFACE AND THE EDGES OF THE FIXED WINDOW DETAIL OF A CHIP  	OUTER PLY ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED
	INNER PLY NOT ACCEPTABLE
	MIDDLE PLY NOT ACCEPTABLE

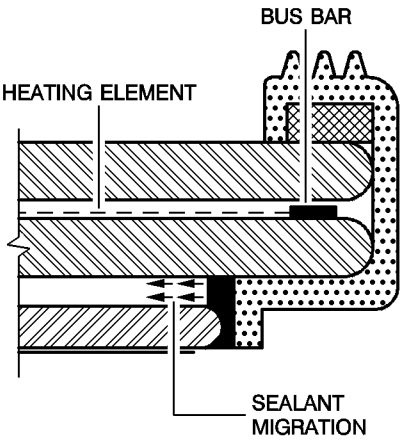
BM5 56 11 12 6 ADX0 04

Fixed Window - Permissible Damage
Figure 603

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
DELAMINATION SEPARATION OF GLASS FROM THE ADJACENT VINYL INTERLAYER OCCURS MOST FREQUENTLY AROUND EDGES,SENSORS AND IN UNHEATED AREAS. AREA WITH DELAMINATION CAN BE CLEAR BUT IT WILL BECOME CLOUDY IF MOIST HAS GONE INTO IT. DELAMINATION LIMITS  X = 76.2mm (3in.) R = 76.2mm (3in.)	MIDDLE/OUTER/INNER PLY AREA A: NOT ACCEPTABLE AREA B: ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED

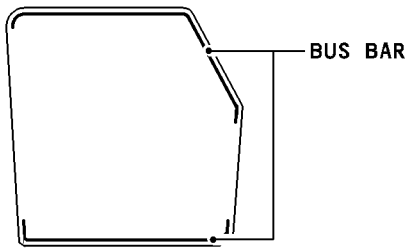
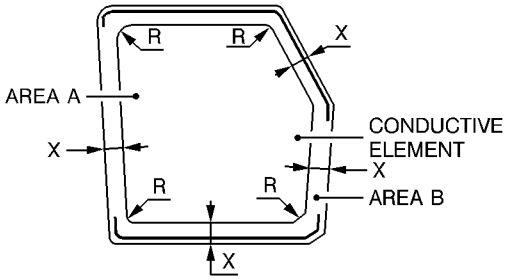
BM5 56 11 12 6 AQR0 06

Fixed Window - Permissible Damage
Figure 604

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
DISCOLORATION THE DISCOLORATION IS CAUSED BY : -CARBON DISCOLORATION CAN BE REFLECTION FROM THE BUSBAR AND THE CONDUCTIVE FILM THIS REFLECTION CHANGES COLOR LIKE A RAINBOW WHEN YOU LOOK AT IT FROM AN OBLIQUE ANGLE -MIGRATION OF BROWN SEALANT TO THE PERIPHERY OF THE OUTER INTERLAYER WHICH CAN EXTEND ON A WIDTH OF 10mm (0.39in.) to 20mm (0.78in.) AT THE PERIPHERY OF THE WINDOW PANEL SEALANT MIGRATION  	ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED

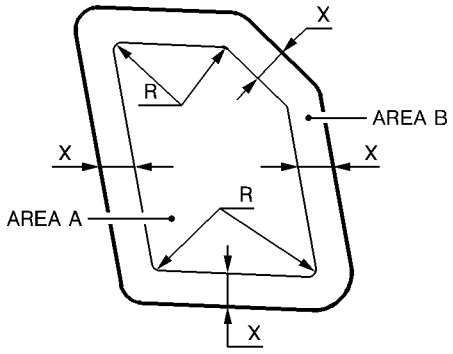
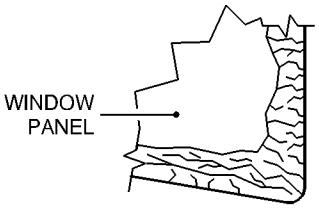
BM5 56 11 12 6 AWR0 03

Fixed Window - Permissible Damage
Figure 605

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
BURN SPOT	
-BURN SPOT ON THE BUS BAR  BURN SPOT ON THE BUS BAR AREA IS CAUSED BY AN ARCING CONSECUTIVE TO A BUS BAR DAMAGE	SWITCH OFF THE SIDE FIXED WINDOW HEATING AS FOLLOWS: OPEN, SAFETY AND TAG THE CIRCUIT BREAKERS FOR LEFT SIDE:7DG FOR RIGHT SIDE:8DG
-BURN SPOT ON THE CONDUCTIVE ELEMENT  X = 76.2mm (3in.) R = 76.2mm (3in.) A BURN SPOT ON THE CONDUCTIVE ELEMENT IS CAUSED BY HEATING ELEMENT DAMAGE OR A FREQUENT HIGHT TEMPERATURE MAKING THE INTERLAYER TURN BROWNISH OR A HOT POINT	AREA A - ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED AREA B - ACCEPTABLE IF THE DIAMETER OF THE MARKS IS LESS THAN 10mm (0.39in.) - IF THE DIAMETER OF THE MARKS IS MORE THAN 10mm (0.39in.) SWITCH OFF THE SIDE FIXED WINDOW HEATING AS FOLLOWS: OPEN, SAFETY AND TAG THE CIRCUIT BREAKERS FOR LEFT SIDE:7DG FOR RIGHT SIDE:8DG
TRANSPARENCY HALOS ON THE SURFACE OF THE FIXED WINDOW PANEL CAN MAKE THEM LESS TRANSPARENT	ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED

BM5 56 11 12 6 AEV0 05

Fixed Window - Permissible Damage
Figure 606

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
INTERLAYER MICROFLAKES MICROFLAKES ARE CHEMICAL REACTIONS IN THE PERIPHERY OF THE INTERLAYER CAUSED BY MOISTURE INGRESS AND WINDOW AGEING INTERLAYER MICROFLAKES LIMITS  X = 76.2mm (3in.) R = 76.2mm (3in.) DETAIL OF MICROFLAKES  	INNER/MIDDLE/OUTER PLY AREA A: NOT ACCEPTABLE AREA B: ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED NOTE : - MICROFLAKES ONLY OCCUR IN THE INTERLAYERS - ANY EQUIVALENT DAMAGE IN ONE OF THE GLASS PLIES WILL CAUSE IMMEDIATE BREAKAGE OF THE PLY
BUBBLES SMALL BUBBLES CAUSED BY GAS LIBERATED WHEN THE VINYL BECOMES TOO HOT THE BUBBLES DO NOT DECREASE THE STRUCTURAL STRENGH	INNER / MIDDLE / OUTER PLY ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED

BM5 56 11 12 6 ATV0 03

Fixed Window - Permissible Damage
Figure 607

(2)Procedure to check burn spots (Ref. Fig. 608)
(a)Put a light source at 45° to the outer surface of the window.
(b)Do a check of the bus bar for burn spots.

E. Close-up
(1)Remove the access platform.

2. Inspection of Bonding Strip Sealant of Fixed Windows

A. Reason for the Job
This procedure is applicable for fixed window with antistatic coating except for SPS fixed window equipped with a stainless steel Z section (P/N SPSA340-5-1-1 and P/N SPSA340-6-1-1).

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform 5.7 m (18 ft. 8 in.)
Referenced Procedure - 56-11-12, P. Block 801	Fixed Side Window Panels - Approved Repairs

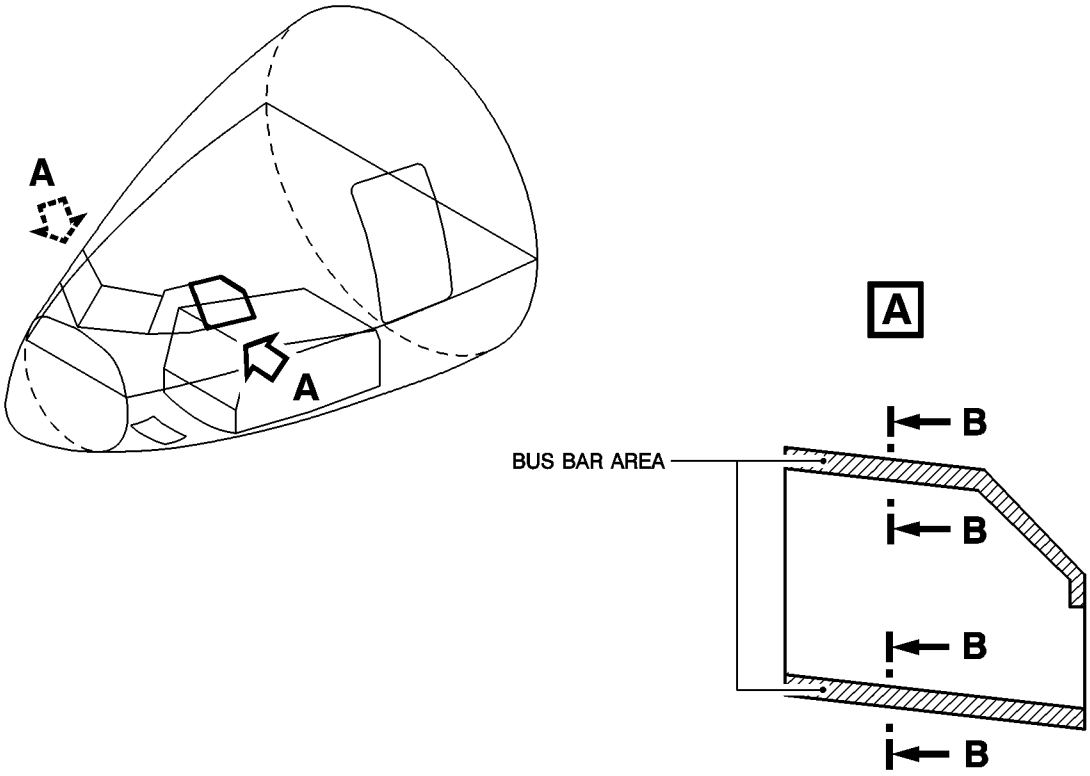
C. Job Set-Up
(1)Position access platform in front of fixed windows.

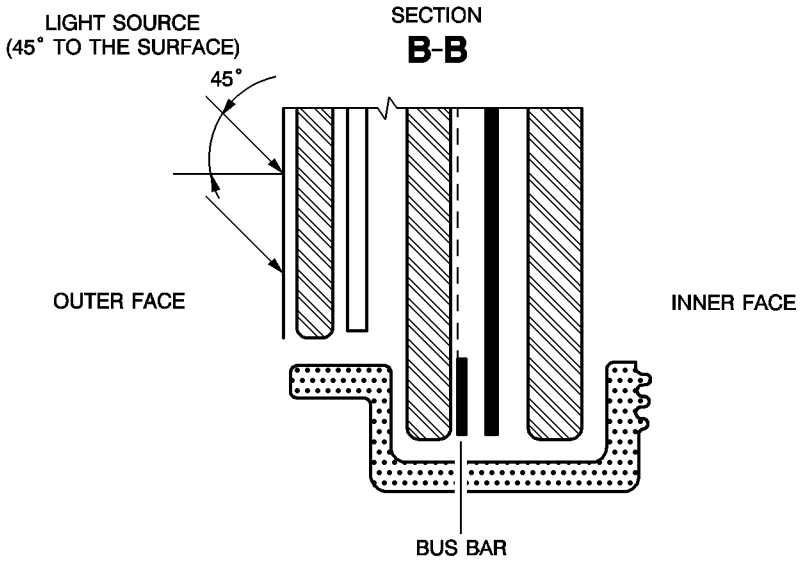
D. Procedure
(Ref. Fig. 609)

(1)Put adhesive strips (3) at each end of the inspection area:
- at the edges of the bonding strips
- at the forward corners of the fixed windows.
Put these strips on the inner side of the fixed window to make them visible from the outer side.
NOTE : This step is performed because the inspection area is difficult to see from the outer side. The adhesive strips define the limits of the inspection area.
(2)Perform a detailed visual inspection of sealant (1) of fixed window bonding strips (2). This inspection is applicable on the outer side of the fixed window between the ends of the adhesive strips.
(3)Make certain that there are no cracks, blisters or other damage.
(a)If damage is found, repair bonding strip sealant (Ref. 56-11-12, P. Block 801).
(4)Remove the adhesive strips (3) from the inner side of the fixed window.

E. Close-Up
(1)Remove access platform.

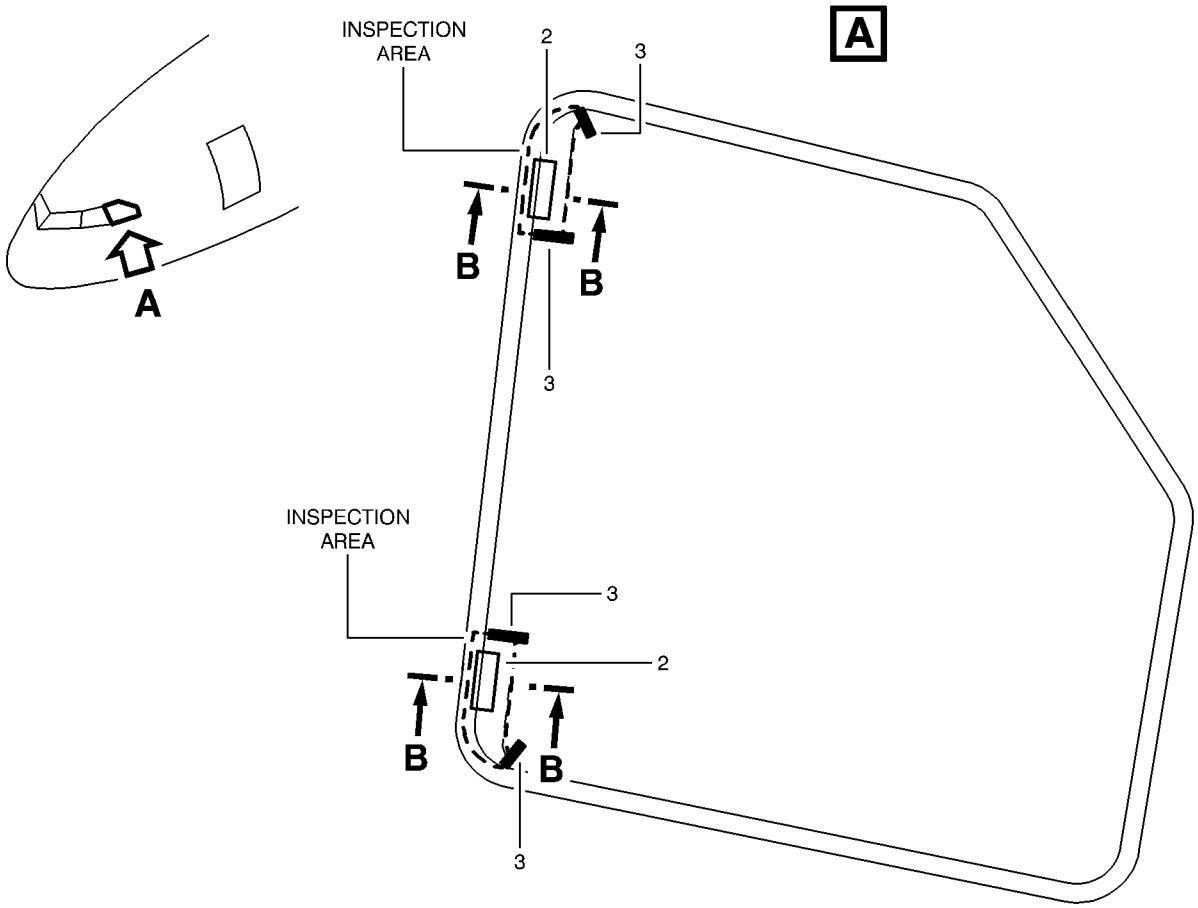
3. Inspection of the Fixed Window Weather Seal



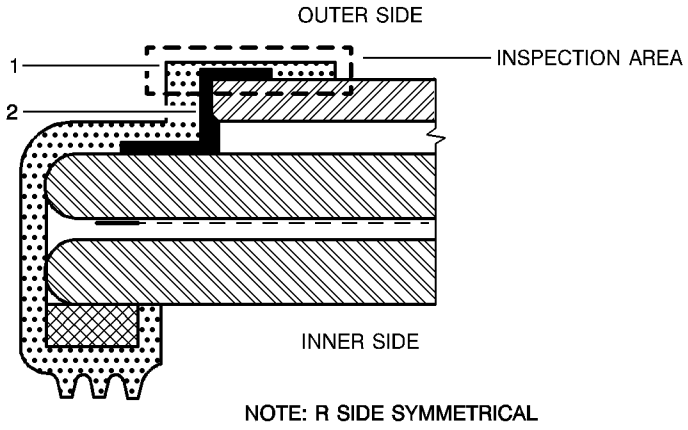


BM5 56 11 12 6 ATT0 01

Check of Burn Spots
Figure 608



SECTION
B-B



NOTE: R SIDE SYMMETRICAL

BM5 56 11 12 6 AVM0 01

Fixed Window Bonding Strip Sealant
Figure 609

R

A. Reason for the Job
This procedure is applicable for the SPS fixed window equipped with a stainless steel Z section (P/N SPSA340-5-1-1 and P/N SPSA340-6-1-1).

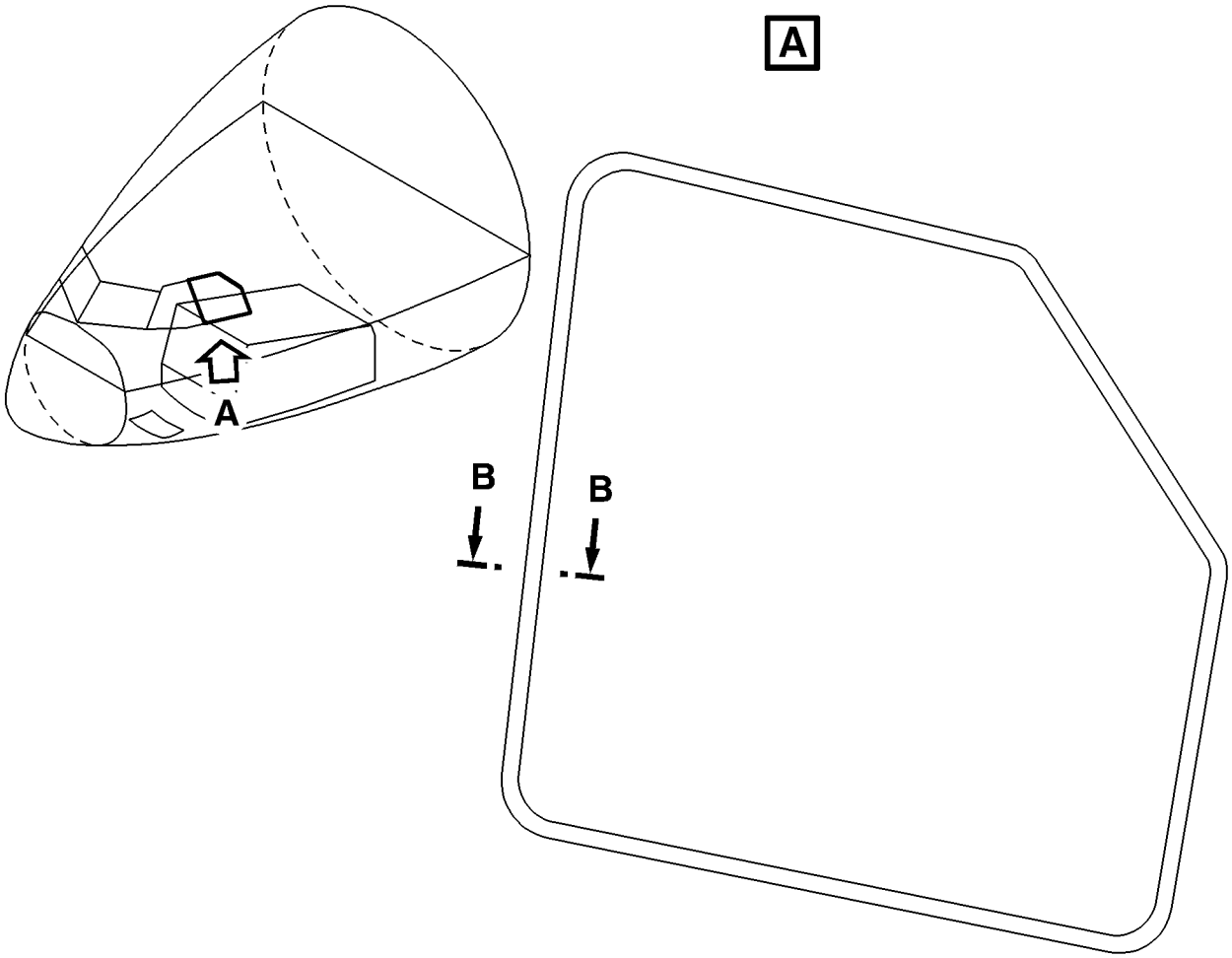
B. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform 5.7 m (18 ft. 8 in.)
Referenced Procedure - 56-11-12, P. Block 801	Fixed Side Window Panels - Approved Repairs

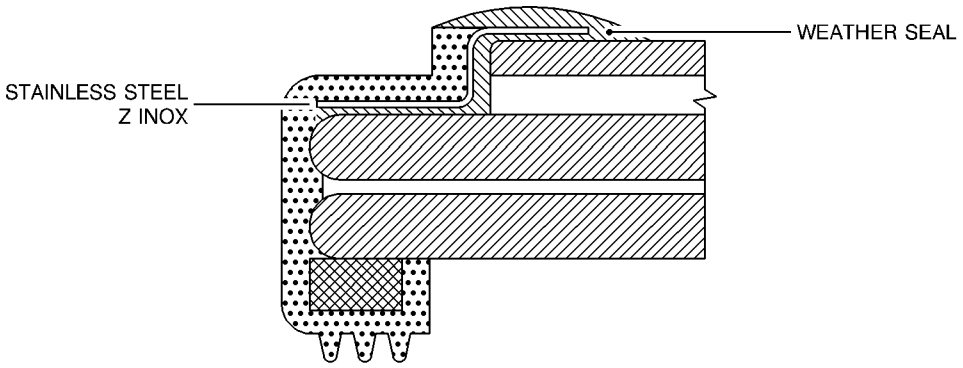
C. Job Set-Up
(1)Position access platform in front of the applicable fixed window.

D. Procedure
(1)Inspection of the fixed window weather seal.
(Ref. Fig. 610)
(a)Do a detailed visual inspection of the weather seal from the outside of the SPS fixed window (P/N SPSA340-5-1-1 and P/N SPSA340-6-1-1).
(b)If you find damage, repair the weather seal (Ref. 56-11-12, P. Block 801).

E. Close-Up
(1)Remove access platform.



SECTION
B-B



BM5 56 11 12 6 AAM0 01

Fixed Window Weather Seal
Figure 610

R

R WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE
R OPENED, SAFETIED AND TAGGED.

1. Repair of the Bonding Strips and Sealant

A. Reason for the Job
This procedure is applicable for fixed window with antistatic coating except for SPS fixed window equipped with a stainless steel Z section (P/N SPSA340-5-1-1 and P/N SPSA340-6-1-1).

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Lint-Free Cloth
(2)	Adhesive Strips
(3)	Access Platform 5.7 m (18 ft. 8 in.)
(4)	Circuit Breaker Safety Clips
(5)Material No. 08-004	Bonding and Adhesive Compounds (Ref. 20-31-00)
(6)Material No. 09-002	Sealants (Ref. 20-31-00)
(7)Material No. 11-008	Cleaning Agents (Ref. 20-31-00)
Referenced Procedure	
- 56-11-11, P. Block 701	Windshield Panels Cleaning

C. Procedure

(1)Position access platform.
(2)Open, safety and tag the following circuit breakers :

PANEL	SERVICE	IDENT.	LOCATION
132VU	ANTI-ICE/WINDOW HEAT/L/115 VAC/REF	3DG	324/L65
132VU	ANTI-ICE/WINDOW HEAT/R/115 VAC/REF	4DG	324/L69
132VU	ANTI-ICE/ENG ANTI-ICE/VALVE CTL/ENG1	5DG	321/P65
132VU	ANTI-ICE/WINDOW HEAT/R/REG &/WARM	6DG	322/N66
132VU	ANTI-ICE/WINDOW HEAT/L/SIDE/WINDOW	7DG	324/L64
132VU	ANTI-ICE/WINDOW HEAT/R/SIDE/WINDOW	8DG	324/L70

D. Procedure
(1)Repair of fixed side window panels bonding strips :
WARNING : USE SOLVENTS/CLEANING AGENTS, SEALANTS AND OTHER SPECIAL MATERIALS ONLY WITH A GOOD FLOW OF AIR THROUGH THE WORK AREA. THESE MATERIALS ARE POISONOUS AND FLAMMABLE AND SKIN IRRITANTS. OBEY THE MANUFACTURERS INSTRUCTIONS. PUT ON PROTECTIVE CLOTHING. DO NOT GET THEM IN YOUR MOUTH. DO NOT SMOKE. DO NOT BREATHE THE GAS.

GET MEDICAL HELP IF YOUR SKIN OR EYES BECOME IRRITATED.

(Ref. Fig. 801)

(a)Carefully remove parts of unstuck silicone. Take care not to damage bonding lead and electrical coating on glass.

(b)Carefully clean inner face of stainless steel Z (metal strip) (1) with Material No. 11-008. Take care not to damage bonding of other strips on bus bar.

(c)Dry carefully.

(d)Stick metal strip in its fixed position with Material No. 09-002. Maintain pressure during 4 hours at 30 deg.C (86 deg.F).

(e)Clean unnecessary Material No. 09-002. Take care not to scratch glass so as to avoid rupture of electrical coating.

(f)Put adhesive strips to locate Material No. 08-004.

(g)Apply several coatings of Material No. 08-004 at this location. Smooth so as to obtain 1.5 mm (0.59 in.) thickness.

E. Close-Up

(1)Remove safety clips and tags and close circuit breakers 3DG, 4DG, 5DG, 6DG, 7DG and 8DG.

(2)Clean panel surface (Ref. 56-11-11, P. Block 701).

(3)Remove access platform.

2. Repair of the Weather Seal

A. Reason for the Job

This procedure is applicable for the SPS fixed window equipped with a stainless steel Z section (P/N SPSA340-5-1-1 and P/N SPSA340-6-1-1).

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform 5.7 m (18 ft. 8 in.)
(2)	Circuit Breaker Safety Clips
(3)	Plastic Scraper
(4)	Adhesive Tape
(5)98D56103003000	Spatula
(6)Material No. 09-045	Sealants (Ref. 20-31-00)
(7)Material No. 11-003	Cleaning Agents (Ref. 20-31-00)
(8)Material No. 19-003	Miscellaneous (Ref. 20-31-00)
Referenced Procedure	
- 56-11-11, P. Block 701	Windshield Panels Cleaning

C. Job Set-Up

(1)Position access platform in front of the applicable fixed window.

(2)Open, safety and tag the following circuit breakers :

PANEL	SERVICE	IDENT.	LOCATION
132VU	ANTI-ICE/WINDOW HEAT/L/115 VAC/REF	3DG	324/L65
132VU	ANTI-ICE/WINDOW HEAT/R/115 VAC/REF	4DG	324/L69
132VU	ANTI-ICE/ENG ANTI-ICE/VALVE CTL/ENG1	5DG	321/P65

PANEL	SERVICE	IDENT.	LOCATION
132VU	ANTI-ICE/WINDOW HEAT/R/REG &/WARM	6DG	322/N66
132VU	ANTI-ICE/WINDOW HEAT/L/SIDE/WINDOW	7DG	324/L64
132VU	ANTI-ICE/WINDOW HEAT/R/SIDE/WINDOW	8DG	324/L70

D. Procedure

(1)Repair of the weather seal
(Ref. Fig. 802)

(a)Examine the seal for erosion, cracking and adhesion to the glass surface. Using a plastic scraper, remove all loose, cracked or perished sealant.

(b)Clean the existing seal with Cleaning Agents (Material No. 11-003) and a lint-free cloth (Material No. 19-003).

(c)Apply adhesive tape on the periphery of the glass panel.

(d)Apply sealant (Material No. 09-045) on the weather seal of the SPS fixed window (P/N SPSA340-5-1-1 and P/N SPSA340-6-1-1) to get the dimensions shown on figure. To do this, use the spatula (98D56103003220).

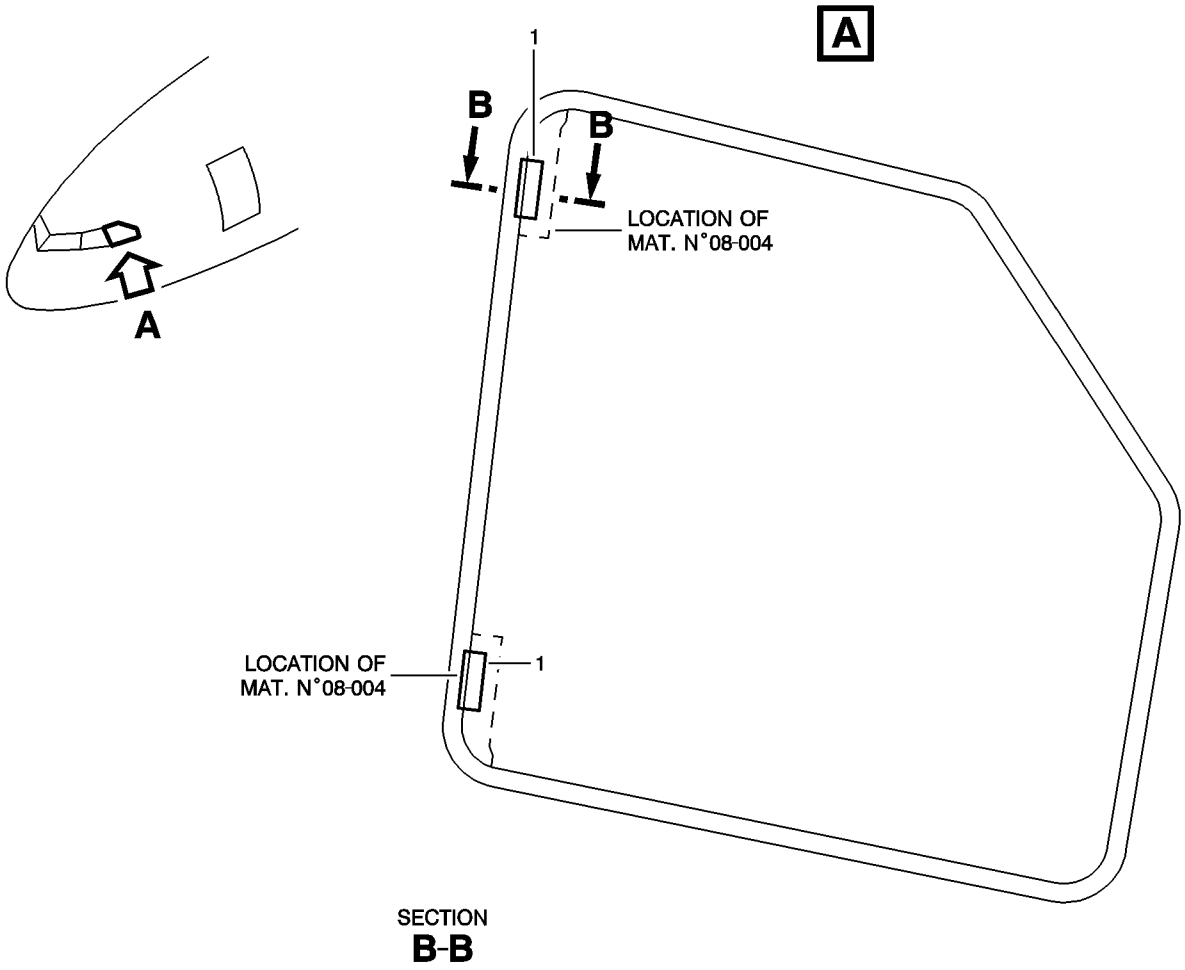
(e)Remove the adhesive tape.

(f)Clean the fixed window (Ref. 56-11-11, P. Block 701).

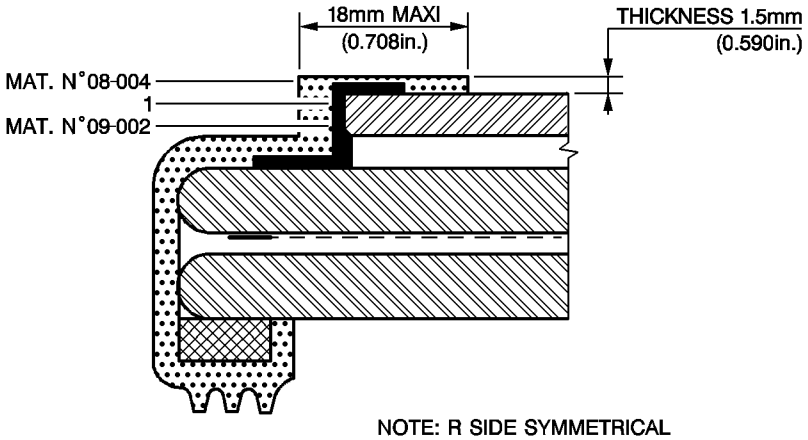
E. Close-Up

(1)Remove safety clips and tags and close circuit breakers 3DG, 4DG, 5DG, 6DG, 7DG, 8DG.

(2)Remove access platform.



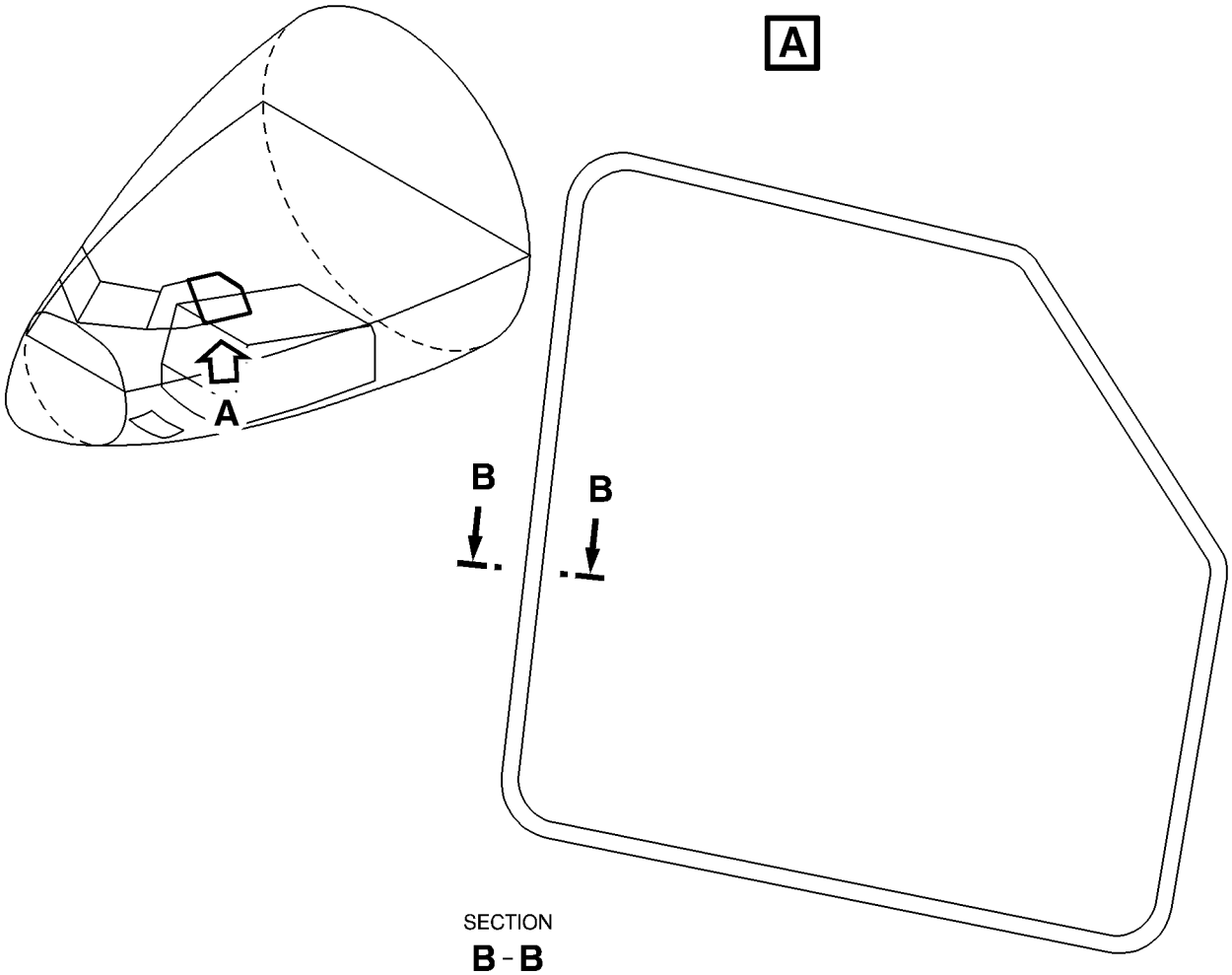
SECTION
B-B



NOTE: R SIDE SYMMETRICAL

BM5 56 11 12 8 AAM0 00

Fixed Side Window Panels Metal Bonding Strips Location
Figure 801



BM5 56 11 12 8 BAM0 01

Fixed Window Weather Seal - Approved Repair
Figure 802

R

SLIDING WINDOWS - DESCRIPTION AND OPERATION

1. General

A. In Flight compartment, between FR4 and FR7 there are two sliding side window panels (RH and LH) which can be used as crew emergency exits.

B. Each panel is mounted in a frame assembly which is designed to allow the panel to slide on rails built into the aircraft structure.

2. Description

A. Each sliding panel assembly consists of :
(1)The panel mounted in a frame.
(2)The operating mechanism, including the frame assembly, opening and locking mechanisms and guide rails.

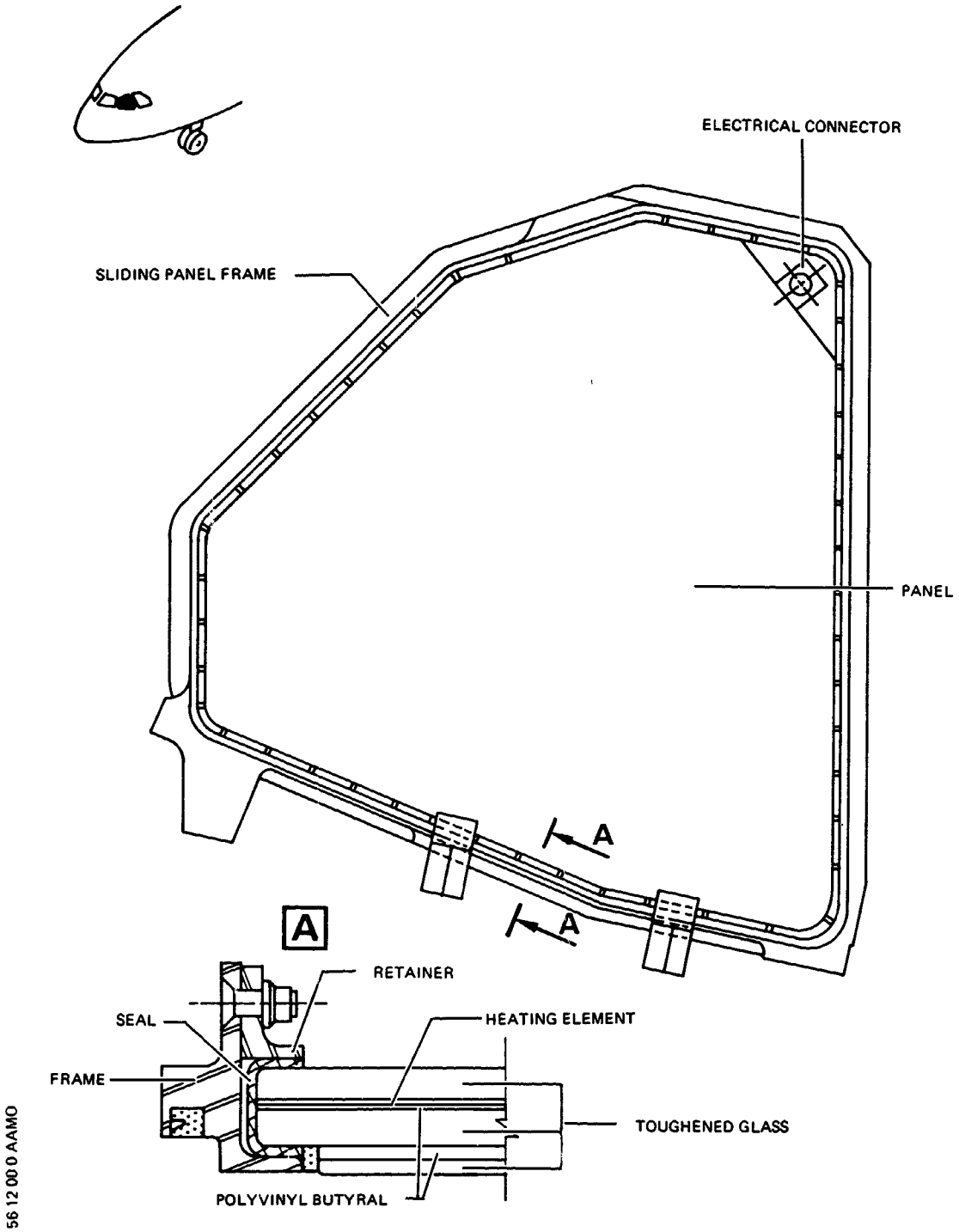
3. Panels (Ref. Fig. 001)

A. Description
(1)Each panel consists of three ply toughened glass, the plies being separated by two layers of polyvinyl butyral.
(2)The two thick layers of glass are called main plies and form the resistant structure of the panel.
(3)The thinnest layer of glass, or front ply, forms the exterior of panel and is flush with the outside skin profile of the aircraft.
(4)The panel heating system is built into the layer of polyvinyl butyral between the main plies.
(5)The periphery of the panel is sealed by a silicone elastomer surround.
(6)The panel and surround are secured to the frame by bolted retainers.
(7)Power supply from the aircraft electrical network to the panel heating system is provided via an electrical connector.

4. Operating Mechanism (Ref. Fig. 002)

A. Description
The main components of this mechanism are :
- A frame, in which the panel is installed
- An upper guide rail
- A lower guide rail
- Four Roller/Bogie assemblies
- An operating lever
- A Lock Closed system
- A Lock Open system

(1)Frame assembly
(a)The panel is secured to the frame by means of retainers.
(b)Installed on this are :
1 The four roller/bogie assemblies and supports permitting their rotation.
2 The roller guide and operating handle mounting.
3 The lock Closed system mechanism.
4 The lock Open system rack.



Assembly of Panel to Frame
Figure 001

5 A seal, ensuring an airtight joint between the structure and panel assembly when closed.

(2)Upper guide rail
(a)This rail is installed on the upper structure of the aperture and serves as a guide for upper bogie rollers.

(3)Lower guide rail.
(a)This rail is installed on the lower structure of the aperture and serves as a guide for the lower bogie rollers and guide roller.

(4)Roller/Bogie assemblies
(a)These components rotate on their four supports installed on the frame and are equipped with built-in rollers.
(b)The angle of rotation of the bogies is controlled and synchronized by connecting rods and gimbal joints.
(This angle of rotation determines the position of the panel in Open position in relation to fixed points, these points being the guide rails).

(5)Operating lever
(a)This lever is located on the lower part of frame.
(b)The lever is connected to :
1 The system of connecting rods and gimbal joints which control the rotation of the roller/bogie assemblies (Horizontal movement of the lever).
2 The Closed position locking pins (Vertical movement of the lever).

(6)The locking in Closed position assembly consists of :
(a)Two latch fittings installed on vertical pillars (one forward and one aft) which mate with locking pins to lock the panel assembly in closed position.
(b)Two locking pins controlled by the operating lever (vertical movement) and a system of levers and rods.

(7)The locking in Open position assembly consists of :
(a)A rack, installed on the lower part of the frame.
(b)A system designed to lock the rack when the panel is in Open position. This system, controlled by a lever, is located under the lower structure of the aperture.

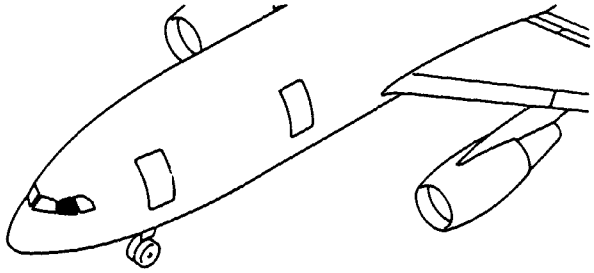
5. Operation

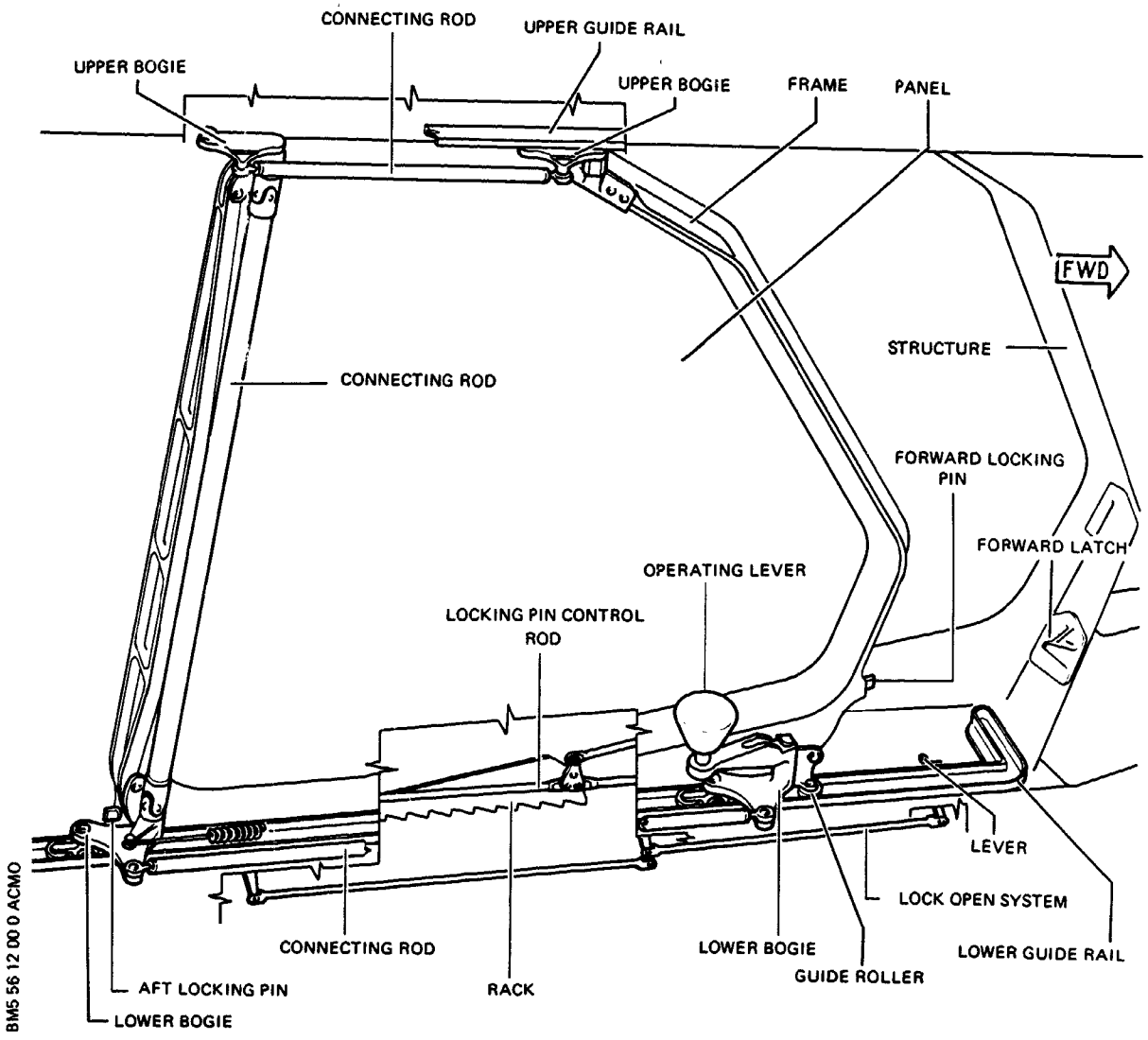
A. Opening

(1)Fully depressing operating handle disengages the locking pins from their latches.
(2)Rotation of the operating lever, aft, frees the window panel from its fixed frame (structure).
(3)When end of travel of the operating lever is reached, pull backwards to slide the window panel aft.

B. Closing

(1)Move lock Open assembly control lever aft (unlocking of rack).
(2)Push operating lever forward until the panel is in position opposite its fixed frame.
(3)Rotation of the operating lever forward moves the panel into its frame and engages the locking pins in their latches.





Sliding Side Window Panel Operating Mechanism
Figure 002

R **WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE**
R **OPENED, SAFETIED AND TAGGED.**

1. Reason for the Job
Replacement of a complete frame/window panel assembly.

2. Equipment and Materials

ITEM	DESIGNATION
A. 62909A4241000	Wrench Set - Flight Compartment Sliding Side Window Actuating Mechanism Adjustment
B.	Circuit Breaker Safety Clips
C. Material No. 08-002	Bonding and Adhesive Compounds (Ref. 20-31-00)
D. Material No. 10-002	Anti Icing and De-Icing Materials (Ref. 20-31-00)
Referenced Procedures	
- 25-11-11, P. Block 401	Captain Seat
- 25-11-12, P. Block 401	First Officer Seat
- 25-13-21, P. Block 401	Upper Sidewall Panels
- 25-13-41, P. Block 401	Furnishings
- 30-42-00, P. Block 501	Windshield Panel Anti Icing and Defogging

3. Procedure

A. Job Set-Up
(1)Depending on which window is to be removed, remove Captain's seat (Ref. 25-11-11, P. Block 401) or First Officer's seat (Ref. 25-11-12, P. Block 401)
(2)Remove torch and chartholder (Ref. 25-13-41, P. Block 401)
(3)Remove panel trimming (Ref. 25-13-21, P. Block 401)
(4)Open sliding side window to be removed.
(5)Open, safety and tag the following circuit breakers :

PANEL	SERVICE	IDENT.	LOCATION
132VU	ANTI-ICE/WINDOW HEAT/L/115VAC/REF	3DG	324/L65
132VU	ANTI-ICE/WINDOW HEAT/R/115VAC/REF	4DG	324/L69
132VU	ANTI-ICE/WINDOW/HEAT L/REG & WARN	5DG	321/P67
132VU	ANTI-ICE/WINDOW/HEAT R/REG & WARN	6DG	322/N66
132VU	ANTI-ICE/WINDOW HEAT/L/SIDE WINDOW	7DG	321/L64
132VU	ANTI-ICE/WINDOW HEAT/R/SIDE WINDOW	8DG	324/L70

B. Removal (Ref. Fig. 401, 402)
(1)Disconnect electrical connector (16)
(2)Remove nuts (34) and screws (33).
(3)Remove nuts (31) and screws (32).
(4)Remove connecting rod (8) ; remove nuts (7), retain washers (6), disenga-

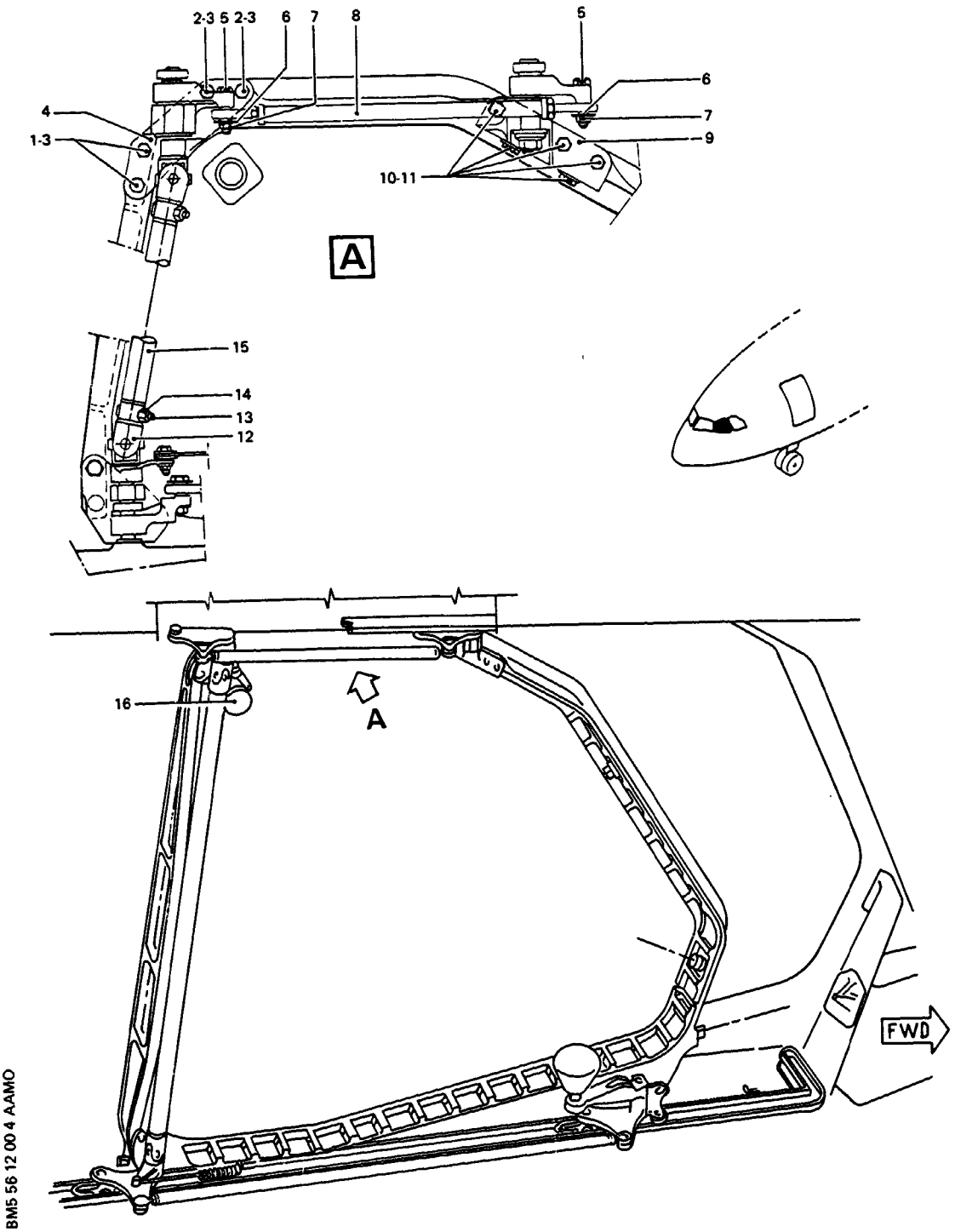
ge bolts (5)
(5)Disconnect connecting rod (15) from lower gimbal joint (12). Remove nut (13), bolt (14).
(6)Remove the four attaching bolts (3) from rear upper bogie (4). Retain the 2 washers (2) and the 2 nuts (1). Disengage bogie (4) equipped with rod (15).
(7)Maintain panel frame and remove the five attaching screws (10) on forward upper bogie (9). Retain the 5 washers (11). Remove bogie (9).
(8)Slightly tilt frame towards A/C centerline and disengage from lower guide rails.
(9)Install brackets and rods on frame. (bolts and nuts hand tightened).

C. Preparation of Replacement Component.
(1)Check that window panel is not scratched.
(2)Check that mechanism works correctly.
(3)Remove the five attaching bolts of the forward upper bogie. Retain washers.
(4)Remove the four attaching bolts of the rear upper bogie. Retain washers and nuts.

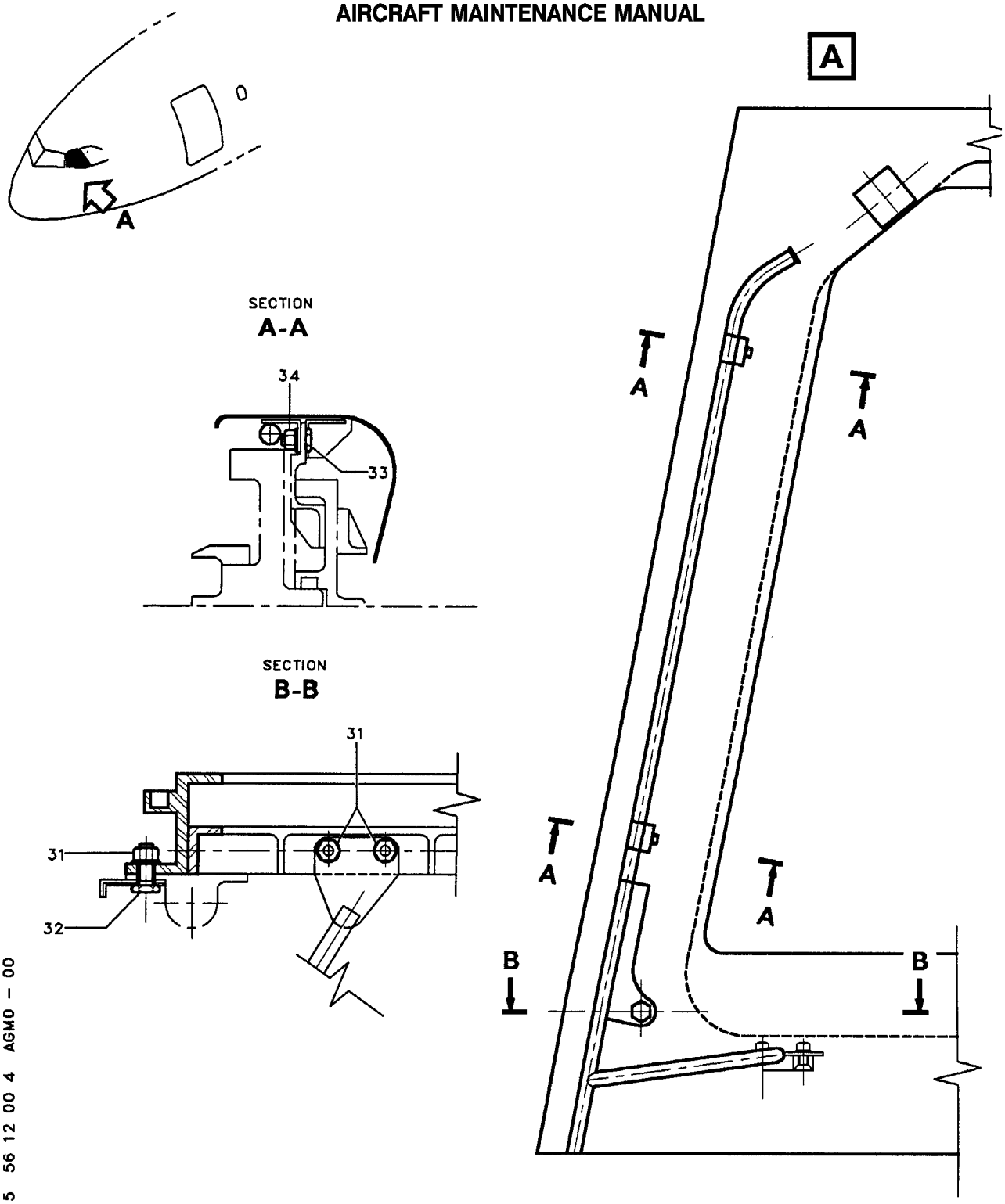
D. Installation (Ref. Fig. 403)
(1)Maintain frame and panel assembly in position and engage lower bogie guide rollers in lower guide rail.
(2)Place operating lever in closed position and move assembly towards front of aircraft.
(3)Engage upper guide rollers in upper guide rail and position upper brackets (3 and 5)
(4)Install 2 bolts on each upper bracket.
(5)Loosen nut (9) and slightly tighten stop (10)
(6)Close sliding side window.

E. Adjustment (Ref. Fig. 403)
(1)Adjustment of peripheral clearance.
(a)Measure peripheral clearance between frame and aircraft structure. Clearance must be between 0.5 mm (0.02 in.) and 1 mm (0.04 in.)
1 If Z clearances are not correct :
- Measure difference between lower and upper clearance.
- Remove sliding side window assembly
- Remove circlips (19,23) from lower bogies.
- Disengage lower bogies (14,28)
- Replace washers (15,27) to compensate for difference of Z clearances previously measured.
- Install washers (15,27), engage lower bogies in corresponding bellcranks (17,25)
- Install circlips (19,23)
- Install sliding panel (Ref. paragraph D.)
- Check Z clearances. Carry out adjustment again if necessary.

2 If X clearances are not correct : (carry out adjustment of Z clearance if necessary)
- Loosen nut (8) of guide roller



Removal/Installation of Sliding Side Window
Figure 401



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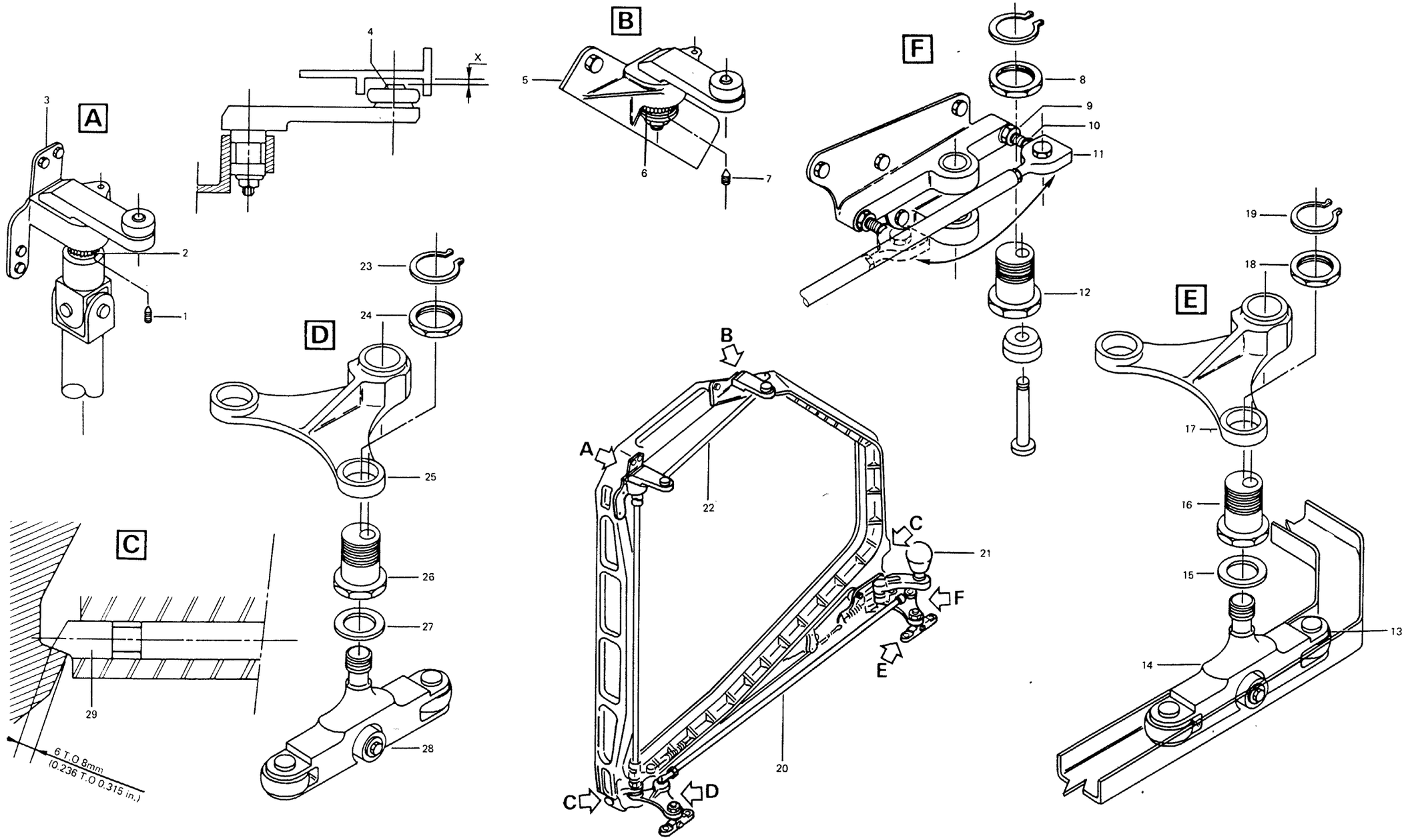
R Removal/Installation of Tube De-Icing
Figure 402



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Adjustment of Sliding Side Window
Figure 403

- According to difference to take up, tighten or loosen the eccentric (12). This adjustment is made by 6° stages.
- Tighten nut (8)
- Close sliding panel
- Check X clearances. Carry out adjustment again if necessary.

(2)Adjustment of seal bearing surface (Y adjustment)

(a)Insert a sheet of paper (width : 25 mm (1 in.) approx.) between the sliding frame and the aircraft fixed frame. Close sliding panel.

- Ensure contact by positioning the four bellcranks at 90° with respect to the sliding frame and parallel to one another (connecting rod).

  Adjust eccentrics to obtain maximum L dimension (Ref. Fig. 404).

NOTE : In order to obtain slight over-centering of assembly, theoretical position of eccentrics (1.5 mm (0.059 in.)) shall be adhered to.

- Check that sheet of paper is pressed by the seal when sliding panel is closed.
- Repeat this operation with the sheet of paper positioned every 100 mm (4 in.) approximately.

NOTE : Check gap between aircraft fixed frame and sliding frame studs.

1 If paper strip is not pressed by the seal :

- Depending on the zone in which this condition is noted, turn one (or several) of the four eccentrics (2, 6, 16, 26)
- Lower eccentrics are operated after slightly loosening nuts (18 or 24)
- Upper eccentrics are operated using equipment P/N 62909A4241000 (flat wrench for aft eccentrics and tube wrench for forward eccen-
R trics) after removing screws (1 or 7)
- Adjustment of upper eccentrics is performed by 6° stages through the 3 possible positions of screws (1,7)
R - Install screws (1,7) in one of the three possible positions.
- Tighten screws (1,7) or nuts (18,24) after adjustment.

  Check seal bearing surface and repeat adjustment of eccentrics, if necessary.

(b)Close sliding window, check that forward lower bogie guide roller (13) is at level of rail bent section.

1 If guide roller is not in position :

- Slightly loosen nut (18) and turn eccentric (16) by a few degrees. Tighten nut (18)
- With sliding window closed, check that forward lower bogie guide roller (13) is at level of rail bent section.

(3)Adjustment of play at upper boggies

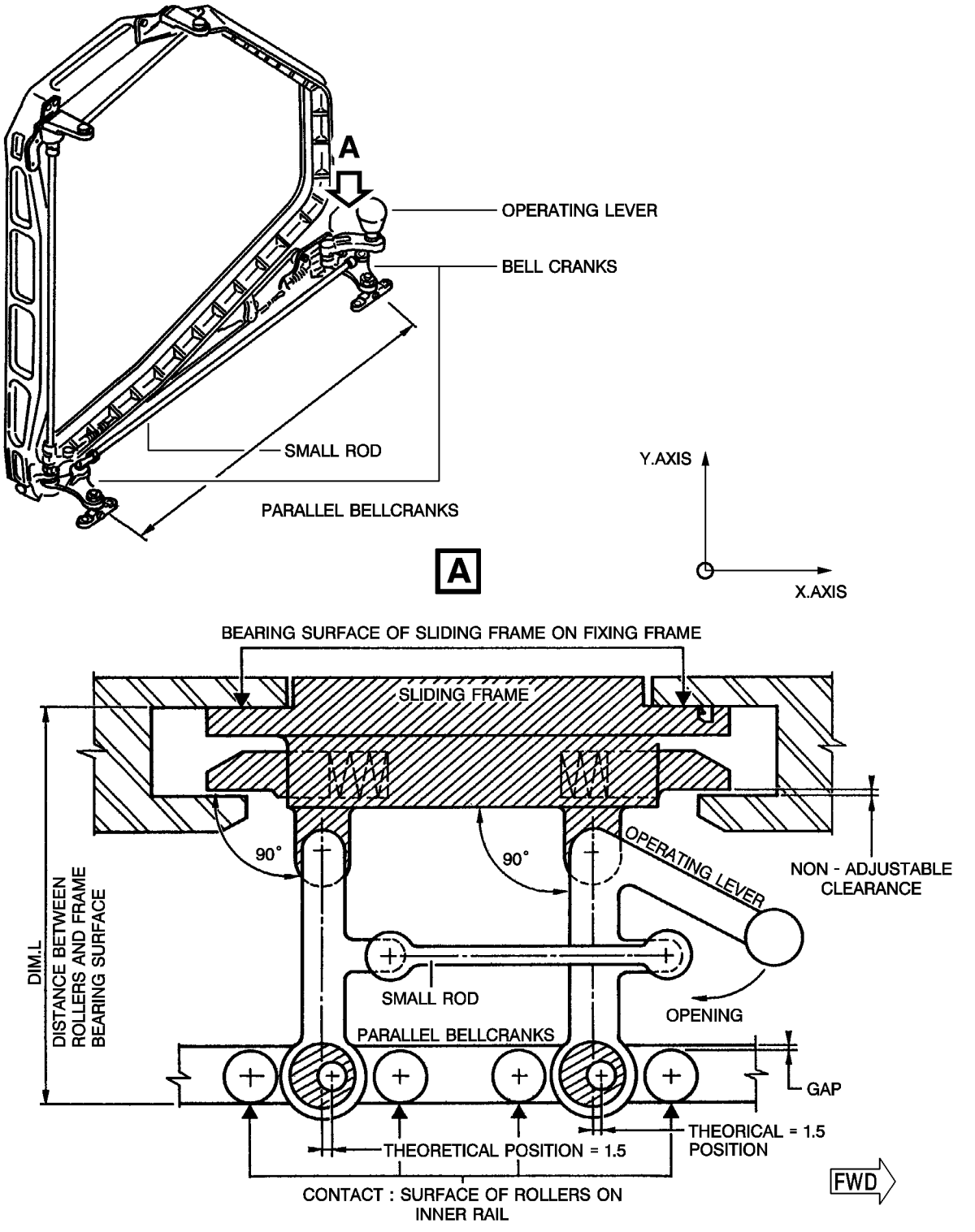
(a)Check play between guide rollers and upper guide rail.

- With sliding window closed, play must be between 0.6 mm and 1.3 mm (0.024 in. and 0.051 in.) for aft guide roller, and between 1 mm and 1.5 mm (0.039 in. and 0.059 in.) for forward guide roller.

1 Adjustment is performed by removing the upper bracket and filing upper stud (4) until correct X play is obtained.

(4)Adjustment of locking pins (29)

(a)Slightly smear locking pins with reddle (marking compound) to check



Adjustment of Panel in Closed Position
Figure 404

R

bearing surfaces.
(b)Close sliding side window
(c)Check that operating lever (21) has a vertical travel of approximately 15 mm (0.6 in.) to the stop.
- If travel is obtained, locking pins are correctly adjusted.
- If travel is not obtained :
Open sliding window : using mounted wheel grind pin contact surface on latch.
Repeat this operation until operating lever correct travel is obtained.
(d)For A/C without visual indicator, check that locking pin between window and forward window frame is properly engaged.
Check that engagement of locking pins is between 6 and 8 mm (0.236 and 0.315 in.).
(e)For A/C with visual indicator, close sliding window.
The operating lever should be in up position, with the bellcrank/lever in down position.
NOTE : The bellcrank/lever goes up when the operating lever is pressed and goes down when the operating lever is released.
NOTE : With the sliding window in locked position (handle fully forward, and red indicator out of view for A/C with visual indicator), the handle has an angular play in the aft direction. This is the adjustment play between the locking pin and the locking fitting. The aft angular movement of the sliding window is very small and has no effect on the locking position.
(f)Remove excess material.
(5)Adjustment of connecting rod
(a)Close sliding side window
(b)Unscrew nut (9) and stop (10) until the latter contacts the connecting rod (11) fork end. Tighten nut (9).

F. Close-Up
(1)Check protrusion between fixed frame and movable frame(A/C depressurized)
Tolerances : + 0.2 mm (0.08 in.) - 0.8 mm (0.031 in.)
Protrusion shall not be necessarily constant.
(2)Sealing check
(a)Close sliding window.
(b)Apply water to periphery of sliding window from outside of aircraft.
(c)Wait 10 minutes and make certain that there is no water leakage at level of window frame.
(d)If there is water leakage or seepage, check adjustments and make certain that seal is in good condition.
(e)Dry off if necessary.
(3)Operate sliding side window and check that operation is free of jerks and friction points.
(4)Finally attach forward upper bracket (5) and rear upper bracket (3).
(5)Safety nuts (18, 24) and screws (1, 7) using Material No.08-002.
(6)If necessary, safety lower and upper rods (20 and 22) using lockwire.
(7)Remove panel protective film.
(8)Install screws (32) and nuts (31). Tighten nuts (31).

(9)Install screws (33) and nuts (34). Tighten nuts (34).
(10)Connect electrical connector (16).
(11)Close circuit breakers 3DG, 4DG, 5DG, 6DG, 7DG and 8DG.
(12)Perform operational test of sliding side window heating network (Ref. 30-42-00, P. Block 501).
(13)Install lining around windows (Ref. 25-13-21, P. Block 401).
(14)Install chartholder and torch (Ref. 25-13-41, P. Block 401).
(15)Clean panel with a solution composed of 1/3 of Material No. 10-002 and 2/3 of water. Wipe off with a clean, dry lint-free cloth.
(16)Install seat previously removed.
(17)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

SLIDING SIDE WINDOW PANELS - REMOVAL AND INSTALLATION

R **WARNING** : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE
R OPENED, SAFETIED AND TAGGED.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clips
B. Material No. 05-001	Special Materials (Ref. 20-31-00)
C. Material No. 10-002	Anti-Icing and De-Icing Materials (Ref. 20-31-00)
Referenced Procedures	
- 25-11-11, P. Block 401	Captain Seat
- 25-11-12, P. Block 401	First Officer Seat
- 25-13-21, P. Block 401	Upper Sidewall Panels
- 25-13-41, P. Block 401	Furnishings
- 30-42-00, P. Block 501	Windshield Panel Anti Icing and Defogging

2. Procedure (Ref. Fig. 401)

A. Job Set-Up
(1)Remove Captain seat (Ref. 25-11-11, P. Block 401) or First Officer seat (Ref. 25-11-12, P. Block 401) depending on which panel is to be removed.
(2)Remove torch and chartholder (Ref. 25-13-41, P. Block 401).
(3)Remove panel trimming (Ref. 25-13-21, P. Block 401).
(4)Open sliding side window.
(5)Open, safety and tag the following circuit breakers :

PANEL	SERVICE	IDENT.	LOCATION
132VU	ANTI-ICE/WINDOW HEAT/L/115 VAC/REF	3DG	324/L65
132VU	ANTI-ICE/WINDOW HEAT/R/115 VAC/REF	4DG	324/L69
132VU	ANTI-ICE/ENG ANTI-ICE/VALVE CTL/ENG1	5DG	321/P65
132VU	ANTI-ICE/WINDOW/HEAT R/REG &/WARM	6DG	322/N66
132VU	ANTI-ICE/WINDOW HEAT/L/SIDE/WINDOW	7DG	324/L64
132VU	ANTI-ICE/WINDOW HEAT/R/SIDE/WINDOW	8DG	324/L70

B. Removal
(Ref. Fig. 401)
(1)Disconnect electrical connector (1).
(2)Remove nuts (14) retain washers (13) remove connecting rod(15) and bolts (12).
(3)Mark connecting rod (8) to lever gimbal joint (5) assembly position, remove nut (7) bolt (6) and disconnect connecting rod (8).
(4)Remove the four upper rear bogie attachment bolts (9), retain the four washers (10) and the two nuts (27) and remove bogie (11) equipped with connecting rod (8).
(5)Support frame, remove the five upper forward bogie attachment bolts

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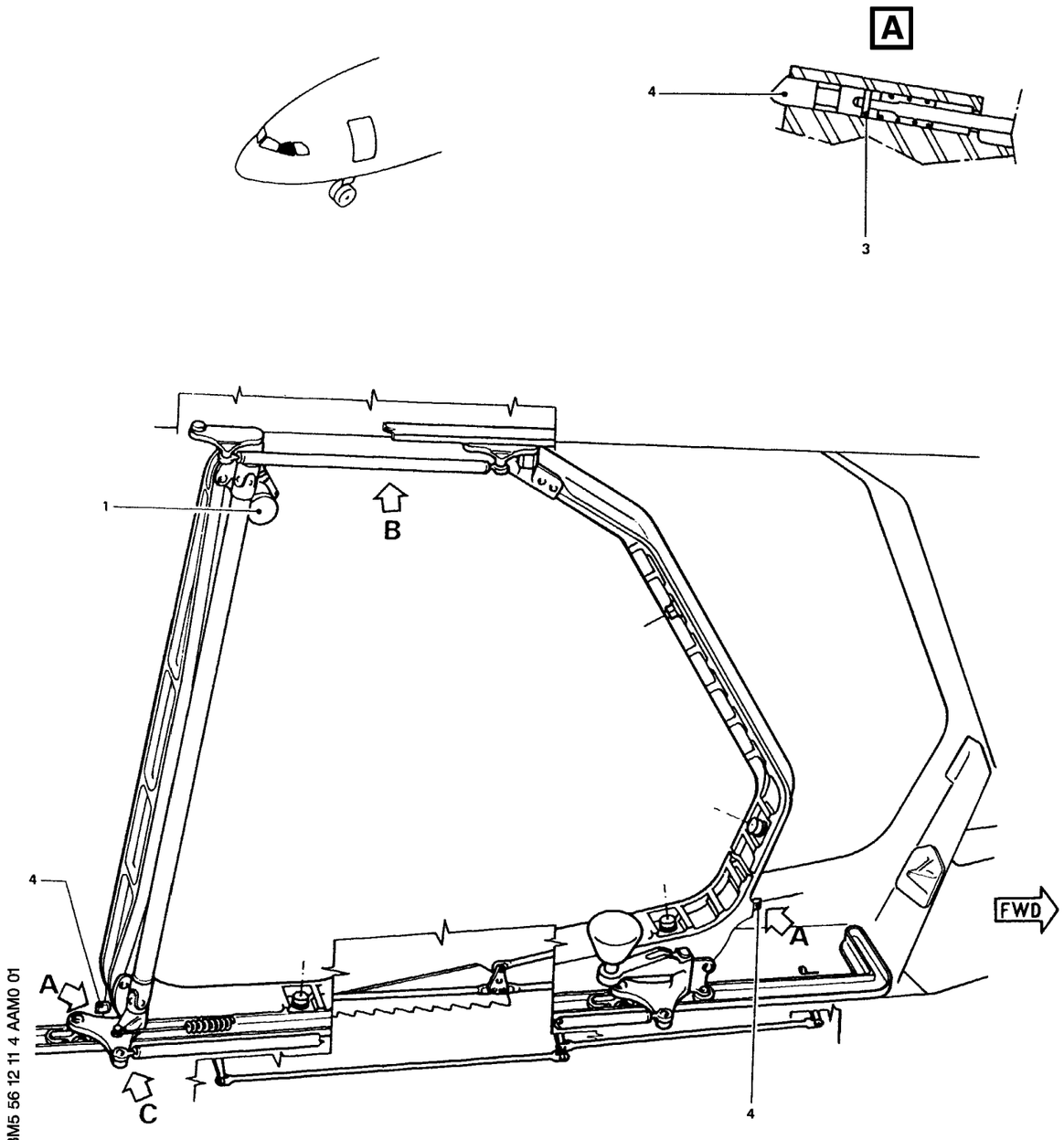
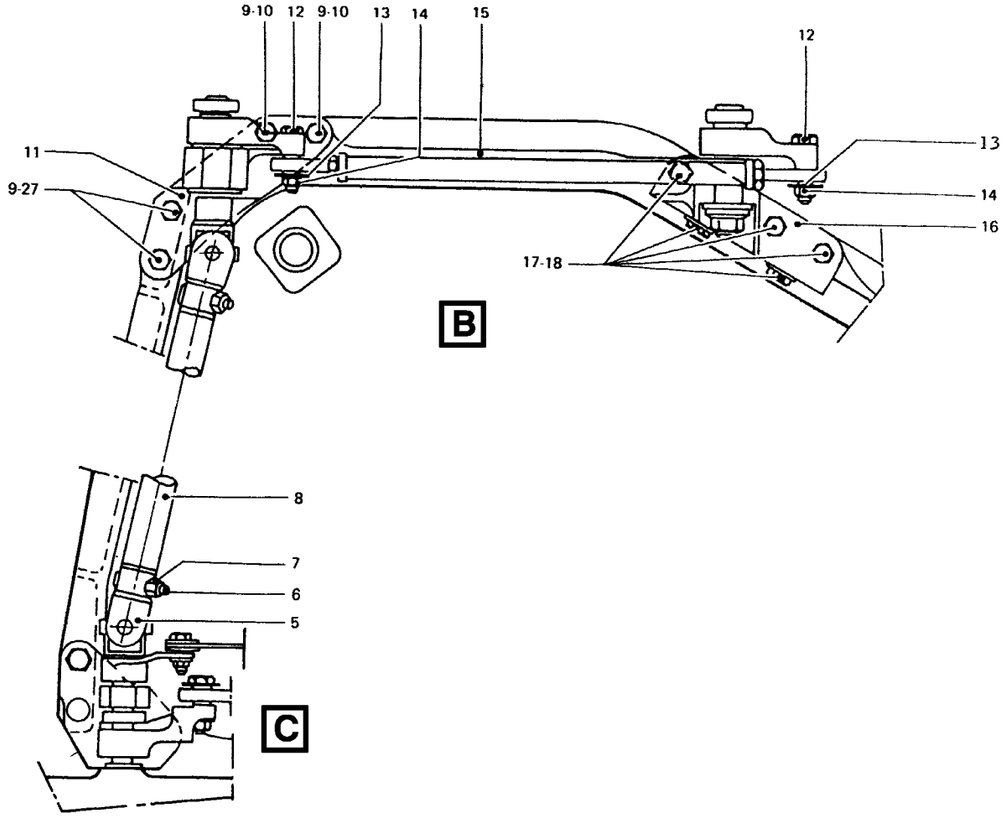




Sliding Side Window Panel
Figure 401

R

(17), retain the five washers (18) and remove bogie (16).
(6)Tilt and remove panel assembly from its lower rails.
(7)Place assembly on a suitable bench.
(8)Removal of the plunger assembly
(Ref. Fig. 402)
WARNING : BE CAREFUL DURING THE REMOVAL/INSTALLATION OF EACH WINDOW TO PREVENT INJURY TO PERSONS AND/OR DAMAGE. THE WINDOW IS HEAVY.
(a)Remove the cotter pins (37) and (38) and discard them.
(b)Hold the spring-loaded plungers (31) and (44) in their housings and remove the washers (36) and (39), the pins (35) and (40), (32) and (43).
(c)Release and remove the plungers (31) and (44) and remove the springs (33) and (42).
(9)Removal of the retainers
(Ref. Fig. 403)
(a)Removal of the retainer (92).
1 Remove the screw (111) and the washer (108).
2 Remove the nuts (109) and the screws (93) and (94).
3 Remove the screw (95) and the nut (110).
4 Remove the retainer (92).
(b)Removal of the retainer (87)
1 Remove the nuts (107) and the screws (88) from the supports (89), (91) and the screws (90).
2 Remove the supports (89), (91).
3 Remove the screws (112) and the washer (106).
4 Remove the nut (105) and the screw (86).
5 Remove the retainer (87).
(c)Removal of the retainer (84).
1 Remove the nuts (104) and the screws (85).
2 Remove the supports (103).
3 Remove the screw (102).
Remove the screw (83) and the nut (101).
4 Remove the retainer (84).
(d)Removal of the retainer (97)
1 Remove the nuts (100) and the screws (81).
2 Remove the supports (82), (99).
3 Remove the retainer (97).
(e)Remove the sliding window panel (96) from its housing (98).

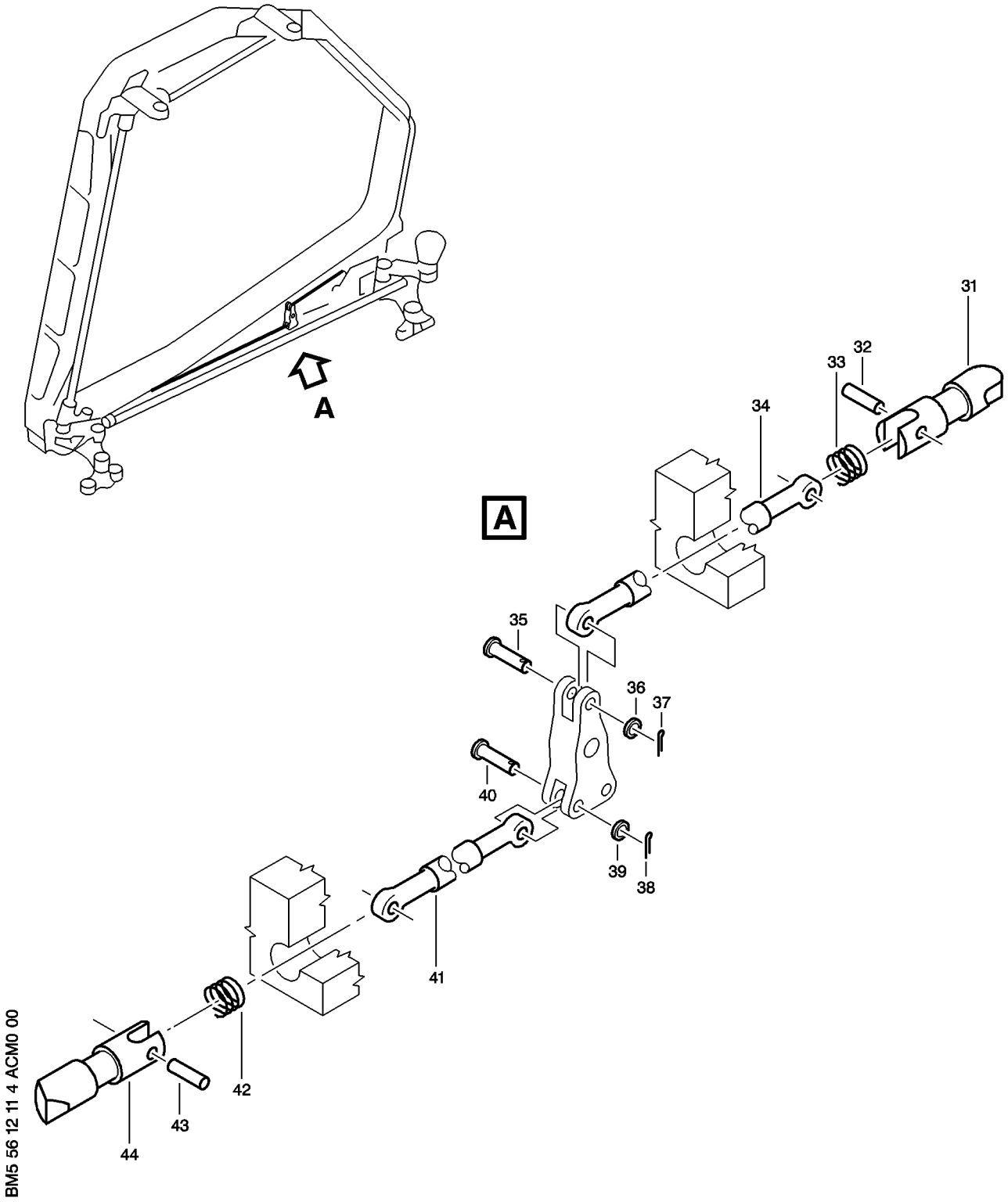
C. Preparation of Replacement Component
WARNING : USE SOLVENTS/CLEANING AGENTS, SEALANTS AND OTHER SPECIAL MATERIALS ONLY WITH A GOOD FLOW OF AIR THROUGH THE WORK AREA.
THESE MATERIALS ARE POISONOUS AND FLAMMABLE AND SKIN IRRITANTS.
OBEY THE MANUFACTURERS INSTRUCTIONS.
PUT ON PROTECTIVE CLOTHING.
DO NOT GET THEM IN YOUR MOUTH.
DO NOT SMOKE.
DO NOT BREATHE THE GAS.
GET MEDICAL HELP IF YOUR SKIN OR EYES BECOME IRRITATED.
(1)Make sure that the parts retained from the removed component are clean and in the correct condition.

(2)Clean all the parts with a soft brush and CLEANING AGENTS (Material No. 11-002). Do not clean the connectors.
(3)Dry the parts and remove remaining cleaning material with a lint-free cloth.
(4)Make certain that replacement component is free from handling damage such as scratches and splintering.
(5)Check electrical connector for correct condition
(6)Make certain that seal is free from crazing and cuts.
(7)Check window frame for good condition, i.e free of dents, cracks, marks, scratches, deformation etc...

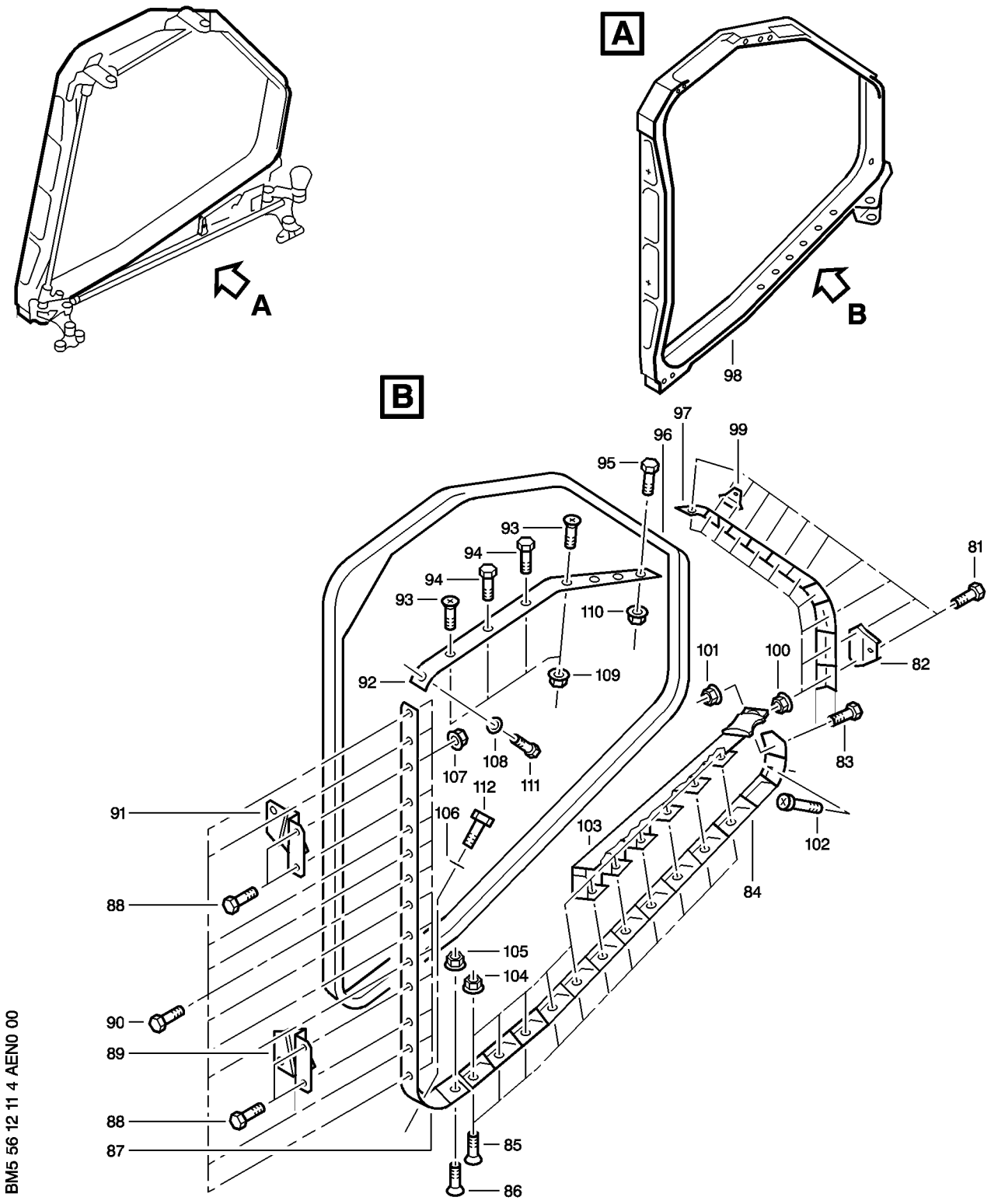
D. Installation.
(1)Coat seal with Material No. 05-001.
(2)Install panel in frame, check that seal is not distorted.
(3)Installation of the retainers
(Ref. Fig. 403)
WARNING : BE CAREFUL DURING THE REMOVAL/INSTALLATION OF EACH WINDOW TO PREVENT INJURY TO PERSONS AND/OR DAMAGE.
THE WINDOW IS HEAVY.
(a)Put the sliding window panel (96) in its housing (98).
(b)Installation of the retainer (97).
1 Put the retainer (97) in position.
2 Install the supports (82), (99) and the screws (81).
3 Install the nuts (100) and do not tighten them.
(c)Installation of the retainer (84).
1 Put the retainer (84) in position.
2 Install the support (103).
3 Install the screws (85) and the nuts (104).
4 Do not tighten the nuts (104).
5 Install the screw (83) and the nut (101) and tighten it.
6 Install the screw (102) and do not tighten it.
(d)Installation of the retainer (87).
1 Put the retainer (87) in position.
2 Install the supports (89), (91).
3 Install the screws (88), (90) and the nuts (107).
4 Do not tighten the nuts (107).
5 Install the screw (86) and the nut (105).
6 Do not tighten the nut (105).
7 Install the washer (106) and the screw (112) and tighten it.
(e)Installation of the retainer (92).
1 Put the retainer (92) in position.
2 Install the washer (108) and the screw (111).
3 Do not tighten the screw (111).
4 Install the screws (93), (94) and the nuts (109).
5 Do not tighten the nuts (109).
6 Install the screw (95) and the nut (110) and do not tighten it.
(f)Tightening of the screws.
NOTE : Tighten the screws in a staggered pattern, tighten a second time and then TORQUE.
1 TORQUE the screws (81), (83), (85), (86), (88), (90), (93), (94), (95), (111) and (112) to 0.8 m.daN (70.79 lbf.in.).

(4)Installation of the plunger assembly
(Ref. Fig. 402)
(a)Apply **COMMON GREASE** (Material No. 04-004) on the movable part of the plungers (31) and (44).
(b)Install the plungers (31) and (44) with the springs (33) and (42) in their housings, in the correct direction.
(c)Install the links (34) and (41), the pins (32) and (43), (35) and (40) and the washers (36) and (39).
(d)Install a new cotter pin (38) and a new cotter pin (37).
(5)Install panel assembly on lower rails.
(6)Engage upper forward bogie (16) rollers in rail, install and hand tighten the five attachment bolts (17) equipped with washers (18).
(7)Position connecting rod (8) on gimbal joint (5). Engage upper rear bogie (11) rollers in rail, install and hand tighten the four attachment bolts (9) equipped with washers (10) or nuts (27).
(8)Insert bolt (6) through connecting rod (8) and gimbal joint (5) install and tighten nut (7).
(9)Tighten upper bogie (11) (16) attachment bolts (9) and (17).
(10)Install connecting rod (15) with bolts (12) washers (13) nuts (14). Tighten nuts.
(11)Connect electrical connector.

E. Close-Up
(1)Check that sliding side window moves freely on its rails.
(2)Make certain that locking mechanism and frame-to-structure sealing fulfill their function.
(3)Remove protective film from panel.
(4)Remove safety clips and tags and close circuit breakers **3DG, 4DG, 5DG, 6DG, 7DG** and **8DG**.
(5)Perform operational test of panel heating system (Ref. 30-42-00, P. Block 501).
(6)Install trimming (Ref. 25-13-21, P. Block 401).
(7)Install chartholder and torch (Ref. 25-13-41, P. Block 401).
(8)Clean panel with a solution containing 1/3 of Material No. 10-002 and 2/3 of water. Wipe with a clean, dry lint-free cloth.
(9)Install seat.
(10)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.



Plunger Assembly
Figure 402



Sliding Window Panel
Figure 403

SLIDING SIDE WINDOW PANELS - INSPECTION/CHECK

WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE OPENED, SAFETIED AND TAGGED.

1. Inspection of Sliding Side Window Panels

A. Reason for the Job

Visual check of fixed panels to make certain that defects, if any, are within quoted tolerances.

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform 5.7 m (18 ft. 8 in.)
R (2)Material No. 11-010	Cleaning Agents (Ref. 20-31-00)
Referenced Procedure - 561000, P. Block 601	Flight Compartment

C. Job Set-Up

(1)Position access platform.

R (2)Clean sliding panels with a solution containing 1/3 of Material No. 11-010 and 2/3 of water. Wipe with a clean dry cloth.

(3)Examine airtight seal (absence of crazing and blistering).

(4)Examine frame in area of seals (absence of distortion).

D. Procedure

(1)Inspection of the Sliding Window.

NOTE : "Impaired" : in inspection tables, the word "impaired" refers to visibility. Visibility is "impaired" when defects have an effect on visibility.
If visibility is "impaired", you must replace the window panel.

(a)Inspect the sliding window for :

1 Cracks (Ref. Fig. 601)

2 Scratches (Ref. Fig. 602)

NOTE : If you see scratches, you must do a check of the depth of the scratches :
- with your finger nail or
- with the MITUTOYO surface tester (Ref. 56-10-00, P. Block 601).

3 Chips (Ref. Fig. 603)

4 Delamination (Ref. Fig. 604)

5 Discoloration (Ref. Fig. 605)

6 Interlayer microflakes (Ref. Fig. 606)

7 Bubbles (Ref. Fig. 606)

8 Burn spot (Ref. Fig. 607)

9 Transparency (Ref. Fig. 607)

DESCRIPTION OF DEFECT	CORRECTIVE ACTIONS
CRACKS LINE TYPE DEFECTS OR CRISS CROSS TROUGH THE DEPTH OF PLY OF THE SLIDING WINDOW	OUTER PLY ONLY ONE FLIGHT LEG AUTHORIZED PROVIDED THAT: - THE AIRCRAFT IS NOT FLOWN IN ANY AREA OF KNOWN ICING CONDITIONS - THE VISIBILITY IS NOT IMPAIRED - THE OTHER SLIDING WINDOW IS SERVICEABLE DO NOT APPLY ELECTRICAL HEAT TO CRACKED SLIDING WINDOW IF THERE IS ARCING
	MIDDLE/INNER PLY MIDDLE OR INNER PLY OR BOTH PLIES CRACKED : NOT ACCEPTABLE

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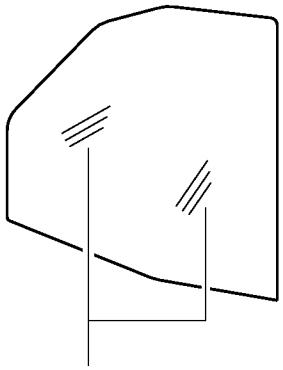
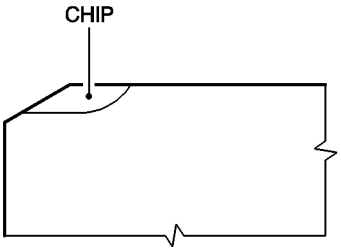
Sliding Window - Permissible Damage
Figure 601

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
SCRATCHES LINE TYPE DEFECTS IN THE EXTERNAL SURFACE OF THE SLIDING WINDOW  SCRATCHES	OUTER PLY ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED INNER PLY ACCEPTABLE: – IF YOU CANNOT FEEL THE SCRATCHES WHEN YOU TOUCH THE SLIDING WINDOW WITH YOUR FINGER NAIL OR – IF THE DEPTH OF THE SCRATCHES MEASURED WITH THE MITUTOYO SURFACE TESTER SJ201 IS LESS THAN 0.05mm (0.002in.) (REF. 56-10-00, P.BLOCK 601). NOT ACCEPTABLE: – IF YOU CAN FEEL THE SCRATCHES WHEN YOU TOUCH THE SLIDING WINDOW WITH YOUR FINGER NAIL OR – IF THE DEPTH OF THE SCRATCHES MEASURED WITH THE MITUTOYO SURFACE TESTER SJ201 IS MORE THAN 0.05mm (0.002in) (REF. 56-10-00, P.BLOCK 601).

BM5 56 12 11 6 ADD0 10

Sliding Window - Permissible Damage
Figure 602

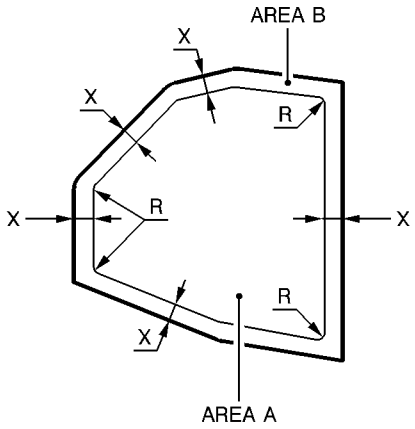
R

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
CHIPS FLAKES OF GLASS BROKEN FROM THE SURFACE AND THE EDGES OF THE SLIDING WINDOW DETAIL OF A CHIP  	OUTER PLY ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED INNER PLY NOT ACCEPTABLE MIDDLE PLY NOT ACCEPTABLE

BM5 56 12 11 6 ATV0 03

Sliding Window - Permissible Damage
Figure 603

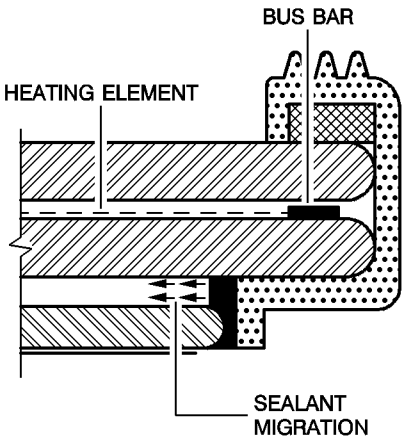
R

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
DELAMINATION SEPARATION OF GLASS FROM THE ADJACENT VINYL INTERLAYER OCCURS MOST FREQUENTLY AROUND EDGES,SENSORS AND IN UNHEATED AREAS. AREA WITH DELAMINATION CAN BE CLEAR BUT IT WILL BECOME CLOUDY IF MOIST HAS GONE INTO IT. DELAMINATION LIMITS  X = 76.2mm (3in.) R = 76.2mm (3in.)	MIDDLE/OUTER/INNER PLY AREA A: NOT ACCEPTABLE AREA B: ACCEPTABLE PERMITTED IF THE VISIBILITY IS NOT IMPAIRED

BM5 56 12 11 6 AQR0 06

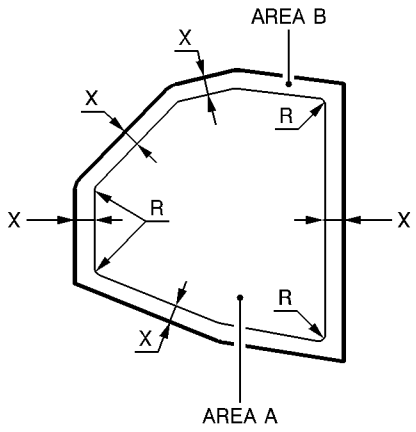
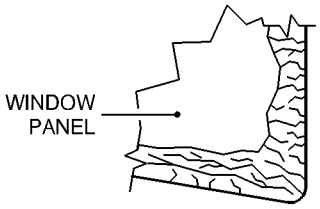
Sliding Window - Permissible Damage
Figure 604

R

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
DISCOLORATION THE DISCOLORATION IS CAUSED BY : -CARBON DISCOLORATION CAN BE REFLECTION FROM THE BUSBAR AND THE CONDUCTIVE FILM THIS REFLECTION CHANGES COLOR LIKE A RAINBOW WHEN YOU LOOK AT IT FROM AN OBLIQUE ANGLE -MIGRATION OF BROWN SEALANT TO THE PERIPHERY OF THE OUTER INTERLAYER WHICH CAN EXTEND ON A WIDTH OF 10mm (0.39in.) to 20mm (0.78in.) AT THE PERIPHERY OF THE WINDOW PANEL SEALANT MIGRATION  	ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED

BM5 56 12 11 6 AWR0 04

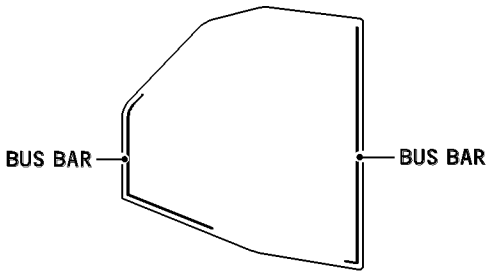
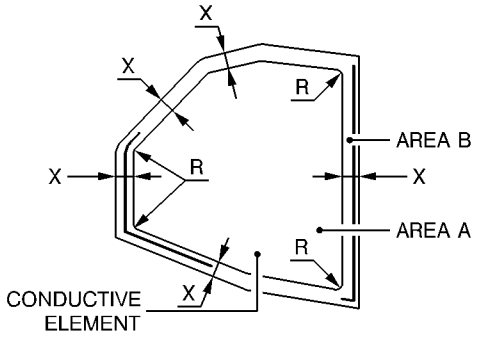
R Sliding Window - Permissible Damage
Figure 605

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
INTERLAYER MICROFLAKES MICROFLAKES ARE CHEMICAL REACTIONS IN THE PERIPHERY OF THE INTERLAYER CAUSED BY MOISTURE INGRESS AND WINDOW AGEING INTERLAYER MICROFLAKES LIMITS  X = 76.2mm (3in.) R = 76.2mm (3in.) DETAIL OF MICROFLAKES  	INNER/MIDDLE/OUTER PLY AREA A: NOT ACCEPTABLE AREA B: ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED NOTE : -MICROFLAKES ONLY OCCUR IN THE INTERLAYERS -ANY EQUIVALENT DAMAGE IN ONE OF THE GLASS PLIES WILL CAUSE IMMEDIATE BREAKAGE OF THE PLY
BUBBLES SMALL BUBBLES CAUSED BY GAS LIBERATED WHEN THE VINYL BECOMES TOO HOT THE BUBBLES DO NOT DECREASE THE STRUCTURAL STRENGH	ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED

BM5 56 12 11 6 AET0 06

Sliding Window - Permissible Damage
Figure 606

R

DESCRIPTION OF DEFECT	CORRECTIVE ACTION
BURN SPOT - **BURN SPOT ON THE BUS BAR**  BURN SPOT ON THE BUS BAR AREA IS CAUSED BY AN ARCING CONSECUTIVE TO A BUS BAR DAMAGE	SWITCH OFF THE SIDE SLIDING WINDOW HEATING AS FOLLOWS: - OPEN, SAFETY AND TAG THE CIRCUIT BREAKER FOR LEFT SIDE:7DG FOR RIGHT SIDE:8DG
- **BURN SPOT ON THE CONDUCTIVE ELEMENT**  X = 76.2mm (3in.) R = 76.2mm (3in.) A BURN SPOT ON THE CONDUCTIVE ELEMENT IS CAUSED BY HEATING ELEMENT DAMAGE OR A FREQUENT HIGHT TEMPERATURE MARKING THE INTERLAYER TURN BROWNISH OR A HOT POINT	**AREA A** - ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED **AREA B** - ACCEPTABLE IF THE DIAMETER OF THE MARKS IS LESS THAN 10mm (0.39in.) - IF THE DIAMETER OF THE MARKS IS MORE THAN 10mm (0.39in.) SWITCH OFF THE SIDE SLIDING WINDOW HEATING AS FOLLOWS: OPEN, SAFETY AND TAG THE CIRCUIT BREAKERS FOR LEFT SIDE:7DG FOR RIGHT SIDE:8DG
TRANSPARENCY HALOS ON THE SURFACE OF THE SLIDING WINDOW PANEL CAN MAKE THEM LESS TRANSPARENT	ACCEPTABLE IF THE VISIBILITY IS NOT IMPAIRED

BM5 56 12 11 6 ART0 04

Sliding Window - Permissible Damage
Figure 607

R

(2)Procedure to check burn spots (Ref. Fig. 608)
(a)Put a light source at 45° to the outer surface of the window.
(b)Do a check of the bus bar for burn spots.

E. Close-Up
(1)Remove the access platform.

2. Inspection of Bonding Strip Sealant of Sliding Windows

A. Reason for the Job
This procedure is applicable for sliding window with antistatic coating except for SPS sliding window equipped with a stainless steel Z section (P/N SPSA340-3-1-1 and P/N SPSA340-4-1-1).

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform 5.7 m (18 ft. 8 in.)
Referenced Procedure - 56-12-11, P. Block 801	Sliding Side Window Panels - Approved Repairs

C. Job Set-Up
(1)Position access platform in front of sliding windows.

D. Procedure
(Ref. Fig. 609)
(1)Perform detailed visual inspection of sealant (1) of sliding window bonding strips (2).
(2)Make certain that there are no cracks, blisters or other damages.
(a)If damage is found, repair bonding strip sealant (Ref. 56-12-11, P. Block 801).

E. Close-Up
(1)Remove access platform.

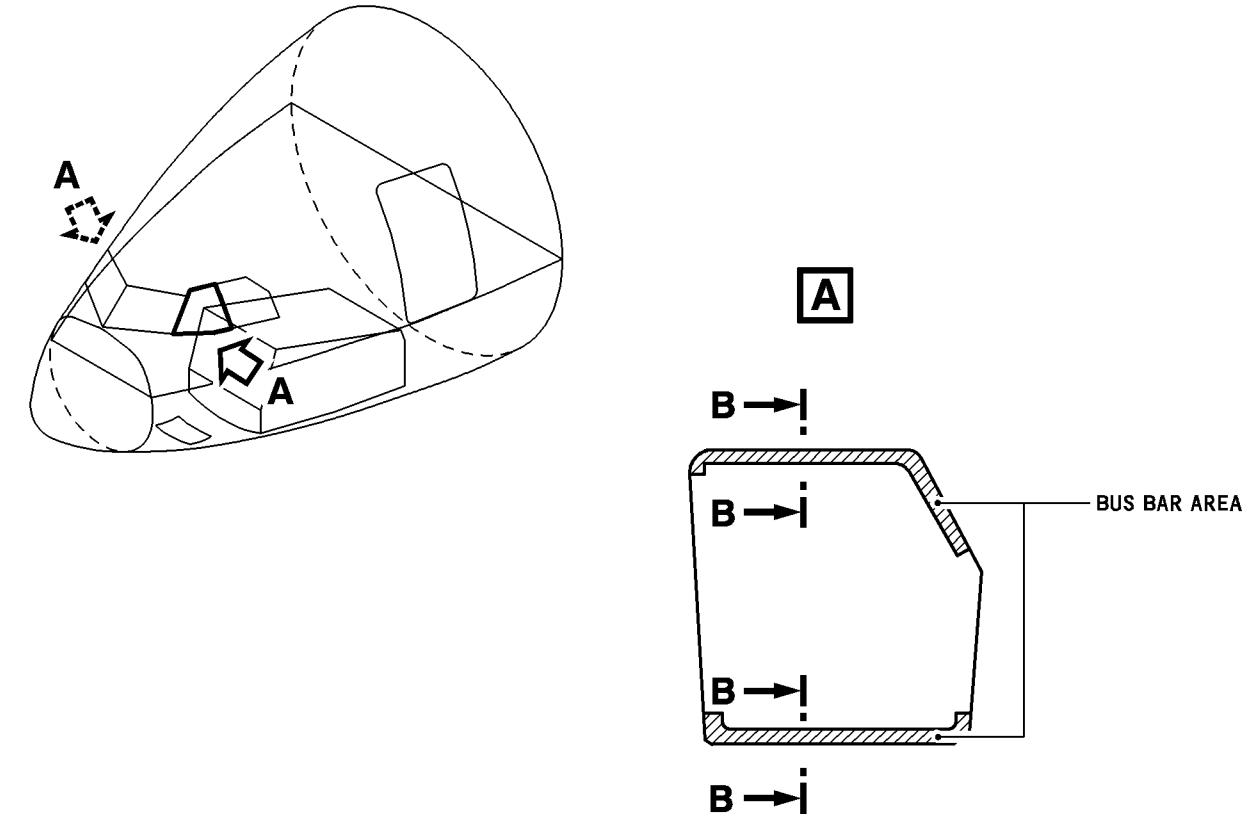
3.Inspection of the Sliding Window Weather Seal

A. Reason for the Job
This procedure is applicable for the SPS sliding window equipped with a stainless steel Z section (P/N SPSA340-3-1-1 and P/N SPSA340-4-1-1).

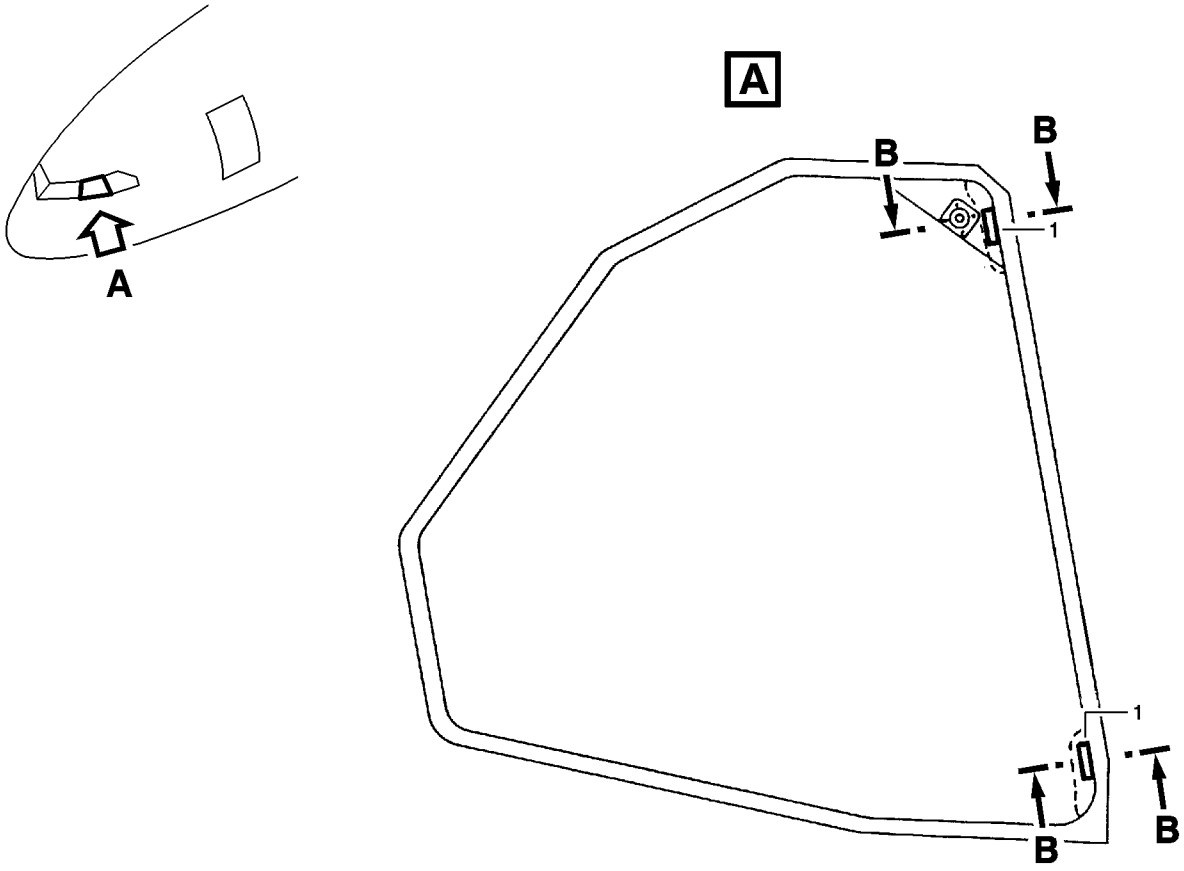
B. Equipment and Materials

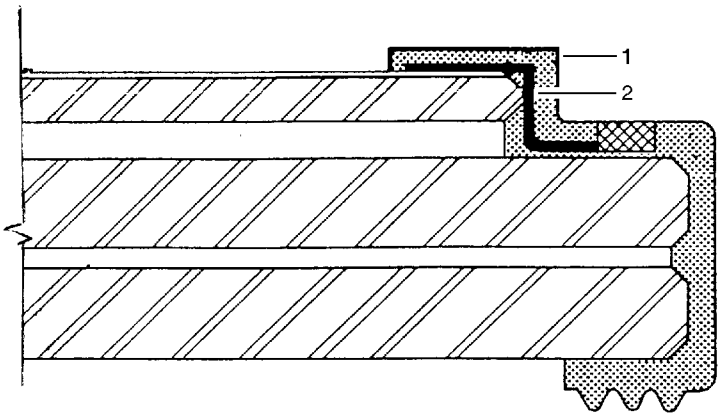
ITEM	DESIGNATION
(1)	Access Platform 5.7 m (18 ft. 8 in.)
Referenced Procedure - 56-12-11, P. Block 801	Sliding Side Window Panels - Approved Repairs

C. Job Set-Up



Check of Burn Spots
Figure 608





NOTE: R SIDE SYMMETRICAL

BM5 56 12 11 6 AVM0 00

Sliding Window Bonding Strip Sealant
Figure 609

(1)Position access platform in front of the applicable sliding window.

D. Procedure

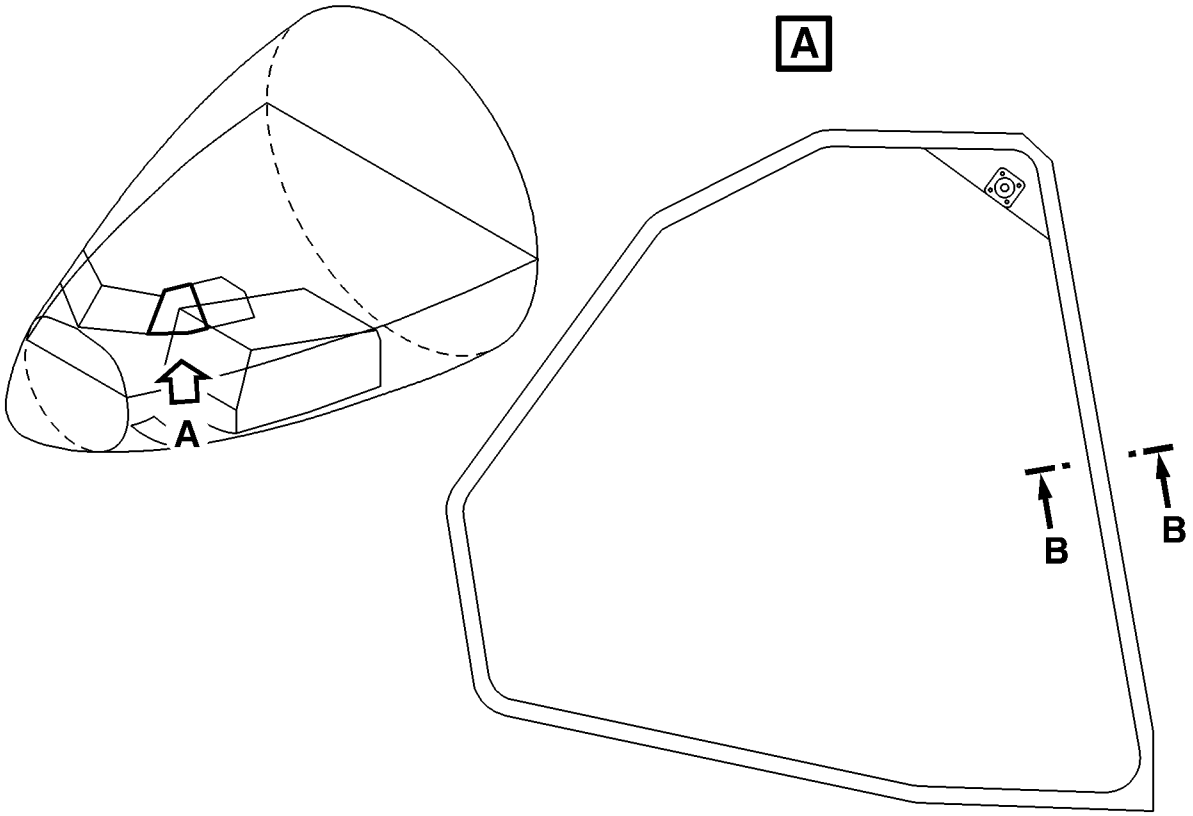
(1)Inspection of the sliding window weather seal
(Ref. Fig. 610)

(a)Do a detailed visual inspection of the weather seal from the outside of the SPS sliding window (P/N SPSA340-3-1-1 and P/NSPSA340-4-1-1).

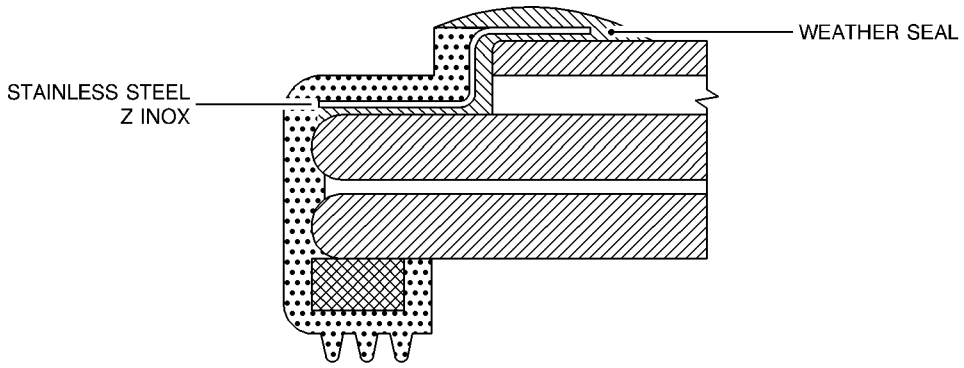
(b)If you find damage, repair the weather seal (Ref. 56-12-11, P. Block 801).

E. Close-Up

(1)Remove access platform.



SECTION
B-B



BM5 56 12 11 6 AAM0 01

Sliding Window Weather Seal
Figure 610

R

WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE OPENED, SAFETIED AND TAGGED.

1. Repair of the Bonding Strips and Sealant

A. Reason for the Job

This procedure is applicable for sliding window with antistatic coating except for SPS sliding window equipped with a stainless steel Z section (P/N SPSA340-3-1-1 and P/N SPSA340-4-1-1).

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Lint-Free Cloth
(2)	Adhesive Strips
(3)	Access Platform 5.7 m (18 ft. 8 in.)
(4)	Circuit Breaker Safety Clips
(5)Material No. 08-004	Bonding and Adhesive Compounds (Ref. 20-31-00)
(6)Material No. 09-002	Sealants (Ref. 20-31-00)
(7)Material No. 11-008	Cleaning Agents (Ref. 20-31-00)
Referenced Procedure	
- 56-11-11, P. Block 701	Windshield Panels Cleaning

C. Job Set-Up

(1)Position access platform.
(2)Open, safety and tag the following circuit breakers :

PANEL	SERVICE	IDENT.	LOCATION
132VU	ANTI-ICE/WINDOW HEAT/L/115 VAC/REF	3DG	324/L65
132VU	ANTI-ICE/WINDOW HEAT/R/115 VAC/REF	4DG	324/L69
132VU	ANTI-ICE/ENG ANTI-ICE/VALVE CTL/ENG1	5DG	321/P65
132VU	ANTI-ICE/WINDOW HEAT/R/REG &/WARM	6DG	322/N66
132VU	ANTI-ICE/WINDOW HEAT/L/SIDE/WINDOW	7DG	324/L64
132VU	ANTI-ICE/WINDOW HEAT/R/SIDE/WINDOW	8DG	324/L70

D. Procedure

(1)Repair of sliding side window panels bonding strips :

WARNING : USE SOLVENTS/CLEANING AGENTS, SEALANTS AND OTHER SPECIAL MATERIALS ONLY WITH A GOOD FLOW OF AIR THROUGH THE WORK AREA.
THESE MATERIALS ARE POISONOUS AND FLAMMABLE AND SKIN IRRITANTS.
OBEY THE MANUFACTURERS INSTRUCTIONS.
PUT ON PROTECTIVE CLOTHING.
DO NOT GET THEM IN YOUR MOUTH.
DO NOT SMOKE.
DO NOT BREATHE THE GAS.
GET MEDICAL IF YOUR SKIN OR EYES BECOME IRRITATED.

(Ref. Fig. 801)
(a)Carefully remove parts of unstuck silicone.
Take care not to damage bonding lead and electrical coating on glass.
(b)Carefully clean inner face of stainless steel Z (metal strip) (1) with Material No. 11-008.
Take care not to damage bonding of other strips on bus bar.
(c)Dry carefully.
(d)Stick metal strip in its fixed position with Material No. 09-002.
Maintain pressure during 4 hours at 30 deg.C (86 deg.F).
(e)Clean unnecessary Material No. 09-002.
Take care not to scratch glass so as to avoid rupture of electrical coating.
(f)Put adhesive strips to locate Material No. 08-004.
(g)Apply several coatings of Material No. 08-004 at this location.
Smooth so as to obtain 1.5 mm (0.59 in.) thickness.

E. Close-Up
(1)Remove safety clips and tags and close circuit breakers 3DG, 4DG, 5DG, 6DG, 7DG and 8DG.
(2)Clean panel surface (Ref. 56-11-11, P. Block 701).
(3)Remove access platform.

2. Repair of the Weather Seal

A. Reason for the Job
This procedure is applicable for the SPS sliding window equipped with a stainless steel Z section (P/N SPSA340-3-1-1 and P/N SPSA340-4-1-1).

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform 5.7 m (18 ft. 9 in.)
(2)	Circuit Breaker Safety Clips
(3)	Plastic Scraper
(4)	Adhesive Tape
(5)98D56103003000	Spatula
(6)Material No. 09-045	Sealants (Ref. 20-31-00)
(7)Material No. 11-003	Cleaning Agents (Ref. 20-31-00)
(8)Material No. 19-003	Miscellaneous (Ref. 20-31-00)
Referenced Procedure	
- 56-11-11, P. Block 701	Windshield Panels Cleaning

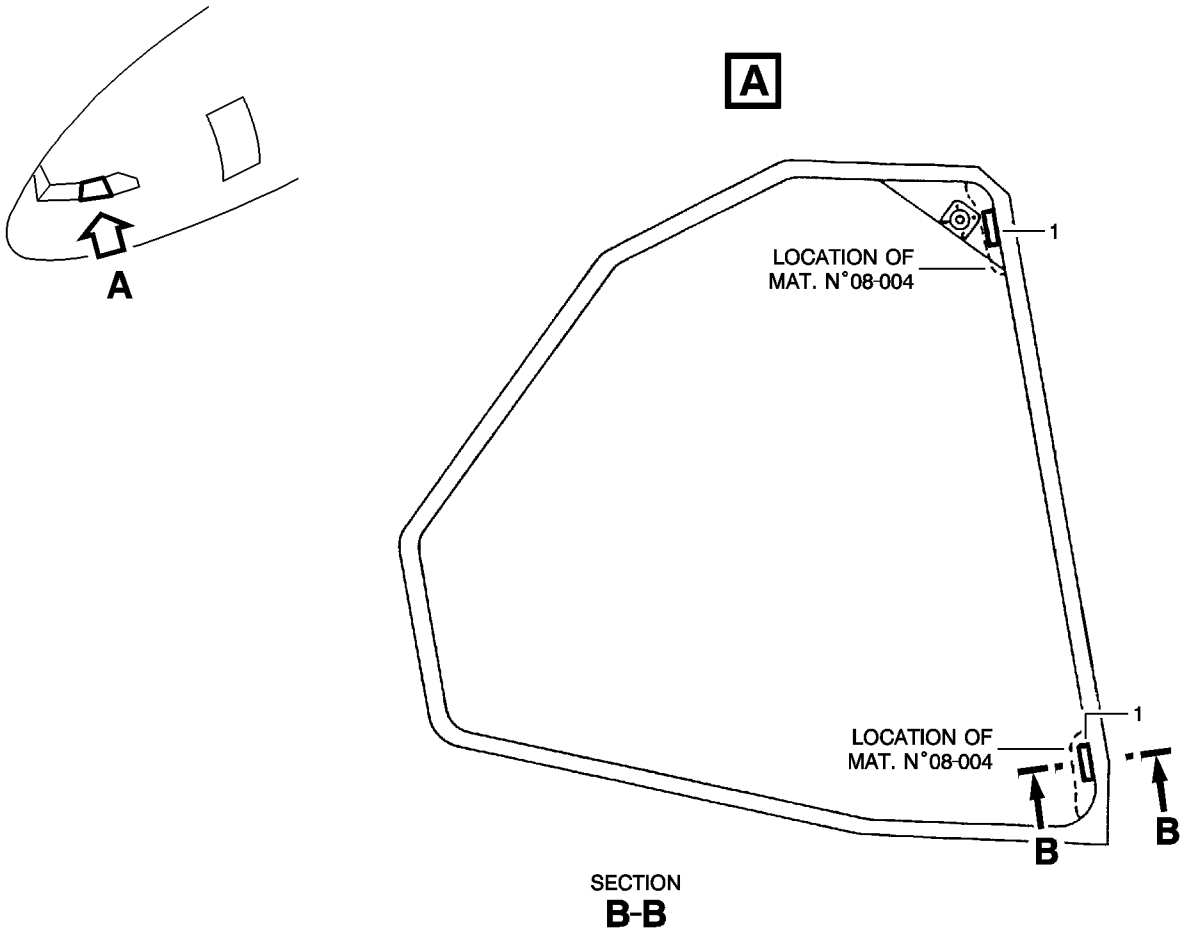
C. Job Set-Up
(1)Position access platform.
(2)Open, safety and tag the following circuit breakers :

PANEL	SERVICE	IDENT.	LOCATION
132VU	ANTI-ICE/WINDOW HEAT/L/115 VAC/REF	3DG	324/L65
132VU	ANTI-ICE/WINDOW HEAT/R/115 VAC/REF	4DG	324/L69
132VU	ANTI-ICE/ENG ANTI-ICE/VALVE CTL/ENG1	5DG	321/P65

PANEL	SERVICE	IDENT.	LOCATION
132VU	ANTI-ICE/WINDOW HEAT/R/REG &/WARM	6DG	322/N66
132VU	ANTI-ICE/WINDOW HEAT/L/SIDE/WINDOW	7DG	324/L64
132VU	ANTI-ICE/WINDOW HEAT/R/SIDE/WINDOW	8DG	324/L70

D. Procedure
(1)Repair of the weather seal.
(Ref. Fig. 802)
(a)Examine the seal for erosion, cracking and adhesion to the glass surface. Using a plastic scraper, remove all loose, cracked or perished sealant.
(b)Clean the existing seal with Cleaning Agents (Material No. 11-003) and a lint-free cloth (Material No. 19-003).
(c)Apply adhesive tape on the periphery of the glass panel.
(d)Apply sealant (Material No. 09-045) on the weather seal of the SPS sliding window (P/N SPSA340-3-1-1 and P/N SPSA340-4-1-1) to get the dimensions shown on figure. To do this, use the spatula (98D56103003220).
(e)Remove the adhesive tape.
(f)Clean the sliding window (Ref. 56-11-11, P. Block 701).

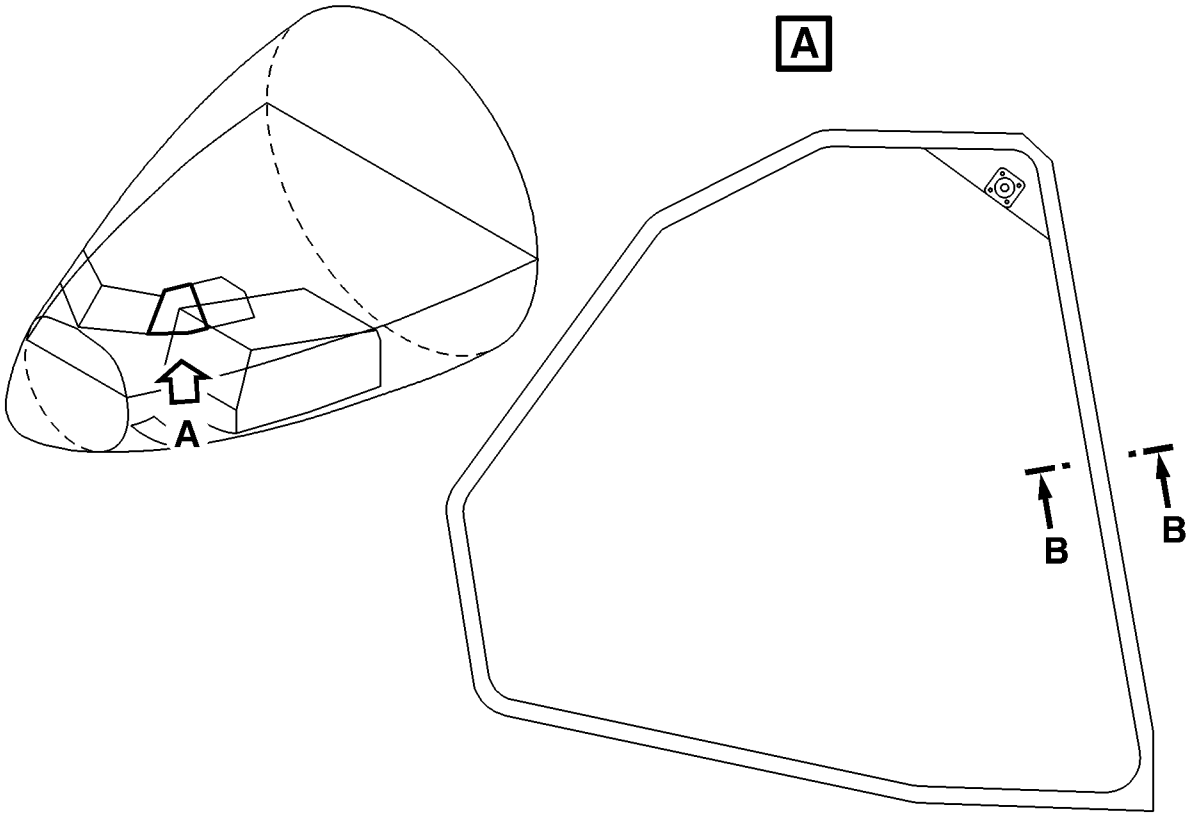
E. Close-Up
(1)Remove safety clips and tags and close circuit breakers 3DG, 4DG, 5DG, 6DG, 7DG and 8DG.
(2)Remove access platform.



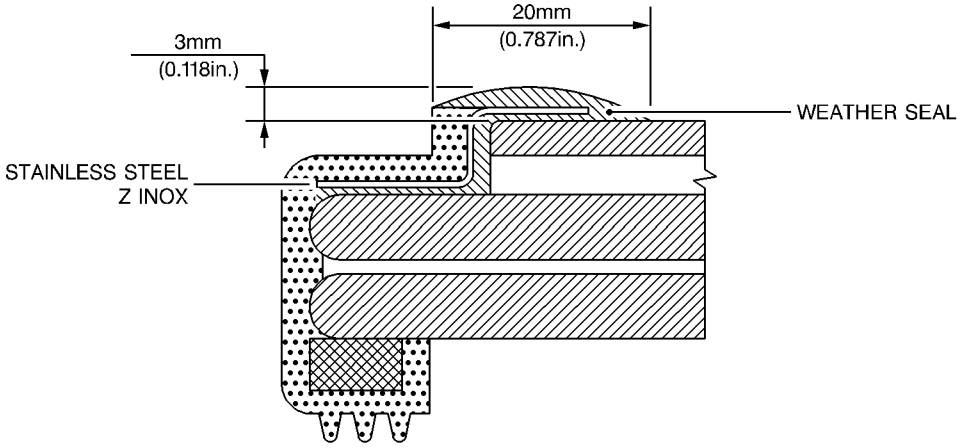
NOTE: R SIDE SYMMETRICAL

BM5 56 12 11 8 AAM0 00

Sliding Side Window Panels Metal Bonding Strips Location
Figure 801



SECTION
B - B



BM5 56 12 11 8 BAM0 01

R Sliding Window Weather Seal - Approved Repairs
Figure 802

1. Reason for the Job
Self Explanatory.

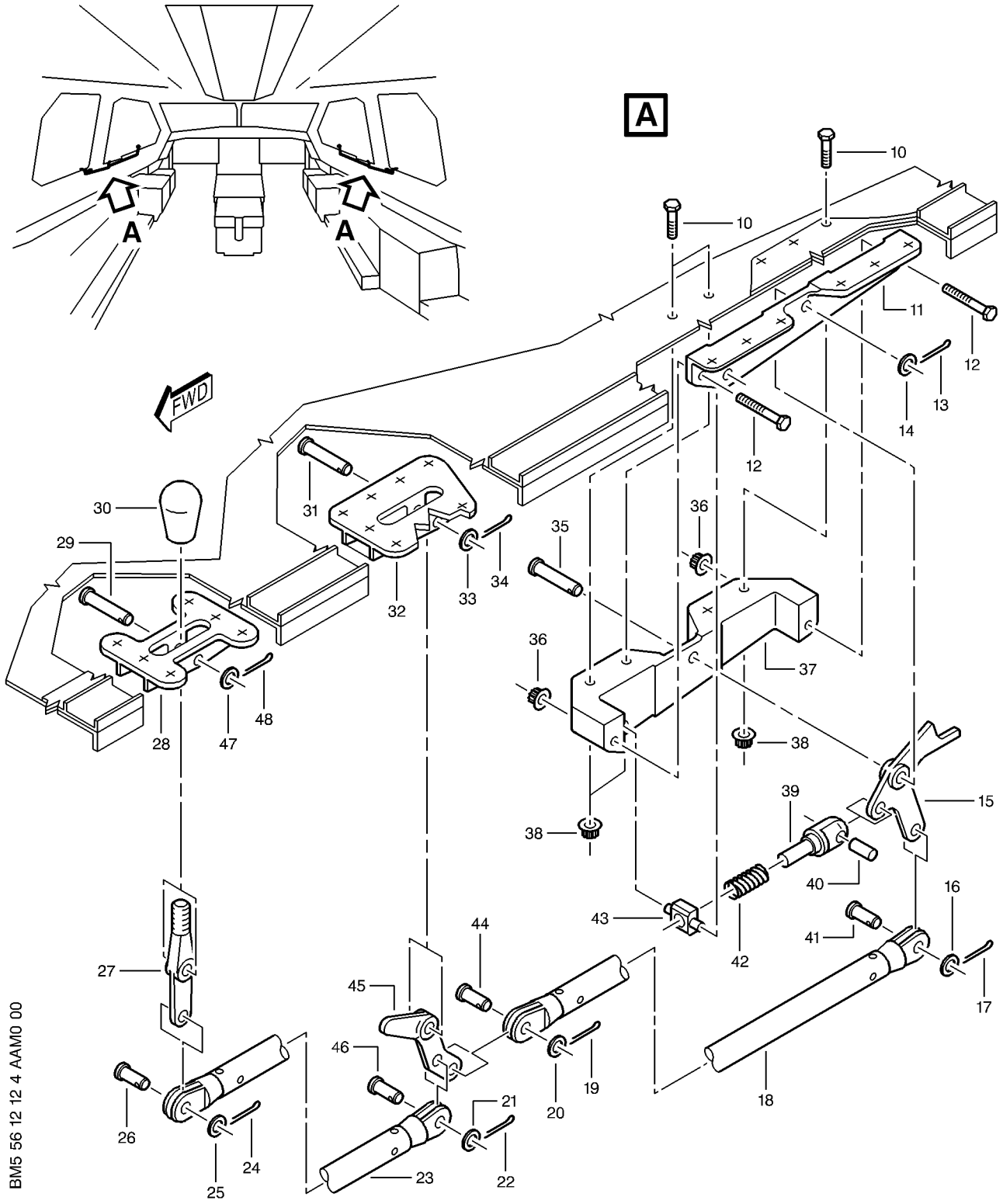
2. Equipment and Materials

ITEM	DESIGNATION
A. Material No. 04-004	Common Grease (Ref. 20-31-00)
Referenced Procedures	
- 25-13-21, P. Block 401	Upper Sidewall Panels
- 25-13-41, P. Block 401	Furnishings

3. Procedure

A. Job Set-Up
(1)Remove torch and chartholder (Ref. 25-13-41, P. Block 401).
(2)Remove lower frame lining panels of sliding and fixed side windows (Ref. 25-13-21, P. Block 401).

B. Removal
(Ref. Fig. 401)
(1)Remove knob (30) from lever (27).
(2)Remove and discard cotter pin (24) from pin (26).
(3)Remove washer (25) and pin (26) from link (23).
(4)Remove and discard cotter pin (48) from pin (29).
(5)Hold lever (27) and remove washer (47) and pin (29) from fitting (28).
(6)Remove lever (27).
(7)Remove and discard cotter pin (22) from pin (46).
(8)Hold link (23) and remove washer (21) and pin (46) from lever (45).
(9)Remove link (23).
(10)Remove and discard cotter pin (19) from pin (44).
(11)Remove washer (20) and pin (44) from link (18).
(12)Remove and discard cotter pin (34) from pin (31).
(13)Hold lever (45) and remove washer (33) and pin (31) from fitting (32).
(14)Remove lever (45).
(15)Remove and discard cotter pin (17) from pin (41).
(16)Hold link (18) and remove washer (16) and pin (41) from locking lever (15).
(17)Remove link (18).
(18)Remove the two screws (12) and the two self-locking nuts (36) from fitting (37).
(19)Discard the two self-locking nuts (36).
(20)Remove and discard cotter pin (13) from pin (35).
(21)Hold locking lever (15) and remove washer (14) and pin (35) from fitting (37).
(22)Disengage locking lever (15) from fittings (11) and (37).
(23)Remove pin (40) from slider (39).
(24)Remove locking lever (15), slider (39) and spring (42).



Sliding Side Window Actuating Mechanism
Figure 401

(25)Hold fitting (37) and remove the three screws (10) and the three self-locking nuts (38) from fitting (37).
(26)Discard the three self-locking nuts (38).
(27)Remove fitting (37) and trunnion (43).

C. Installation
(1)Clean the component interface and/or the adjacent area.
(2)Do a visual inspection of the component interface and/or the adjacent area.
(3)Apply grease (Material No. 04-004) on trunnion (43), on slider (39) and pins (26), (29), (31), (35), (40), (41), (44) and (46).
(4)Put trunnion (43) in position on fitting (37).
(5)Put fitting (37) with trunnion (43) in position on fitting (11) and lower rail.
(6)Install the three screws (10) and the three new self-locking nuts (38) on fitting (37) and tighten them with your hand.
(7)Install spring (42) on slider (39).
(8)Install slider (39) in trunnion (43).
(9)Put locking lever (15) in position on slider (39).
(10)Install pin (40) on slider (39).
(11)Engage locking lever (15) between the two fittings (11) and (37).
(12)Install pin (35), washer (14) and a new cotter pin (13).
(13)Install the two screws (12) and the two new self-locking nuts (36).
(14)Tighten self-locking nuts (36) and (38).
(15)Put lever (45) in position on fitting (32).
(16)Install pin (31), washer (33) and a new cotter pin (34).
(17)Put lever (27) in position on fitting (28).
(18)Install pin (29), washer (47) and a new cotter pin (48).
(19)Install link (18) on locking lever (15).
(20)Install pin (41), washer (16) and a new cotter pin (17).
(21)Install link (18) on lever (45).
(22)Install pin (44), washer (20) and a new cotter pin (19).
(23)Install link (23) on lever (45).
(24)Install pin (46), washer (21) and a new cotter pin (22).
(25)Install link (23) on lever (27).
(26)Install pin (26), washer (25) and a new cotter pin (24).
(27)Install knob (30) on lever (27).

D. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipement.
(2)Install lower frame lining panels of sliding and fixed side windows (Ref. 25-13-21, P. Block 401).
(3)Install chartholder and torch (Ref. 25-13-41, P. Block 401).

SLIDING WINDOW PREFORMED SEAL - REMOVAL/INSTALLATION

WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE OPENED, SAFETIED AND TAGGED.

1. Reason for the Job
Replacement of the sliding window preformed seal.

2. Equipment and Materials

ITEM	DESIGNATION
A. Material No. 08-004	Bonding and Adhesive Compounds (Ref. 20-31-00)
B. Material No. 08-018	Bonding and Adhesive Compounds (Ref. 20-31-00)
C. Material No. 10-002	Anti-Icing and De-Icing Materials (Ref. 20-31-00)
D. Material No. 11-004	Cleaning Agents (Ref. 20-31-00)
E.	Access Platform 4 m (13 ft. 12 in.)
Referenced Procedures	
- 52-10-00, P. Block 301	Passenger/Crew Door - Special Precautions

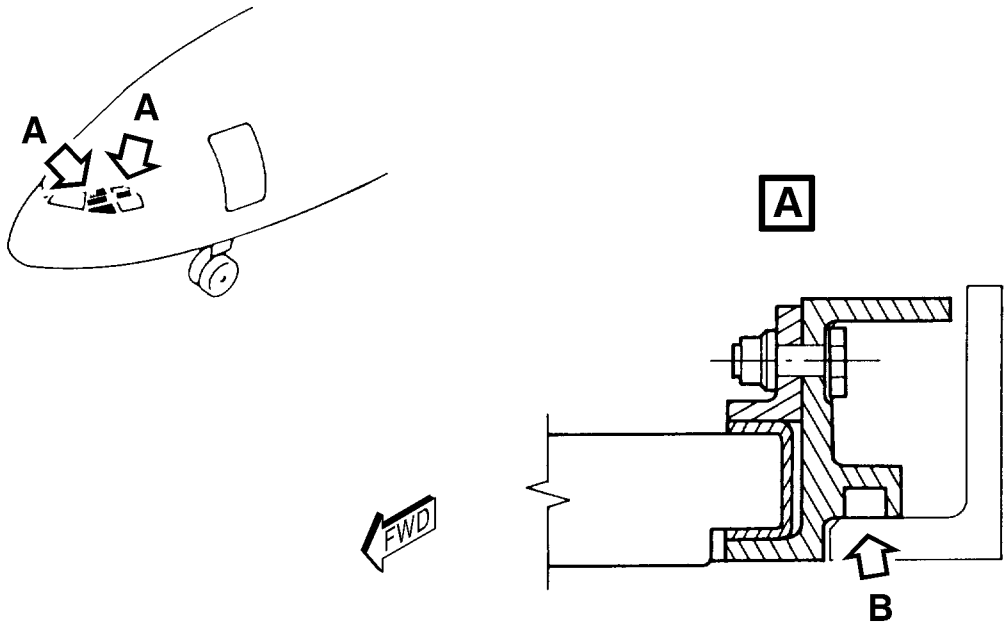
3. Procedure

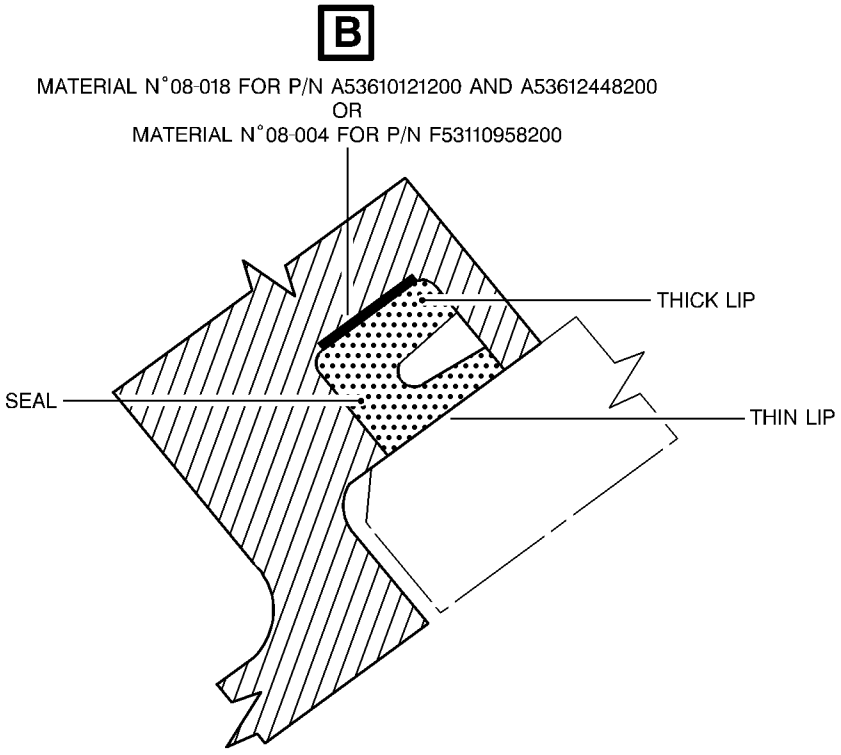
A. Job Set-Up
(1)Position access platform.
(2)Open passenger/crew door (Ref. 52-10-00, P. Block 301).
(3)Install protections on consoles under sliding window to prevent any ingress of cleaning agent during cleaning of window seal groove.
(4)Open sliding window.
(5)Window seal shall be removed from outside the aircraft.
CAUTION : DO NOT SCRATCH WINDOW PANE.

B. Removal
(1)Unstick, remove and discard preformed seal.

C. Preparation of Replacement Component
(Ref. Fig. 401)
(1)Slightly abrade bottom area of window frame seal groove with Scotch Brite (Ref. Fig. 401).
(2)Clean and degrease with cleaning agent (Material No. 11-004).
(3)Slightly abrade mating surface of seal.
(4)Apply adhesive compound on the surface of the seal in contact with the bottom of the groove and on the bottom of the groove.
(a)For P/N A53610121200 and A53612448200, apply adhesive compound (Material No. 08-018).
R (b)For P/N F53110958200, apply adhesive compound
R (Material No. 08-004).
(6)Allow to dry until adhesive compound is tack-free.

D. Installation of the Seal





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Sliding Window Seal
Figure 401

R

NOTE : The seal has two lips : a thick lip and a thin lip. You must install the seal with the thick lip at the bottom of the groove.

(1)Install seal within 30 min by pressing it firmly into position (Ref. Fig. 401).

CAUTION : MAKE CERTAIN THAT THERE IS NO RESIDUE OF ADHESIVE COMPOUND ON FRAME AND BETWEEN THE LIPS.

E. Test

(1)Make certain that outer lip of seal moves freely all around the frame.
(2)Operate sliding window and check that window seal is correctly installed and compressed.

F. Sealing check

(1)Close sliding window.
(2)Apply water to periphery of sliding window from outside of aircraft.
(3)Wait 10 minutes and make certain that there is no water leakage at level of window frame.
(4)If there is water leakage or seepage, check adjustments and make certain that seal is in good condition.
(5)Dry off if necessary.

G. Close-Up

(1)Close sliding window.
(2)Clean window pane with a solution containing 1/3 of Material No. 10-002 and 2/3 of water. Wipe with a clean, dry lint-free cloth.
(3)Remove protections on consoles under sliding window.
(4)Close passenger/crew door (Ref. 52-10-00, P. Block 301).
(5)Remove access platform.

SLIDING WINDOW PREFORMED SEAL - INSPECTION/CHECK

WARNING : MAKE SURE THAT THE CIRCUIT BREAKERS RELATED TO THE WEATHER RADAR ARE OPENED, SAFETIED AND TAGGED.

1. Inspection of Sliding Window Preformed Seal

A. Reason for the Job
Visual check of the sliding window preformed seal

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform 5.7 m (18 ft. 8 in.)
Referenced Procedure - 56-12-13, P. Block 401	Preformed Seal Windows - Removal/Installation

C. Job Set-Up
(1)Position access platform.
(2)Open the sliding window panel.

D. Procedure
(1)Inspection of the Sliding Window Preformed Seal.
(a)Do a detailed visual inspection of the sliding window preformed seal.
(b)Make sure that there are no cracks and blisters on the seal.
(c)Examine the frame in the area of the seal.
(d)If you find damage, remove and replace the preformed seal (Ref. 56-12-13, P. Block 401).

E. Close Access
(1)Close sliding window panel.
(2)Remove the access platform.

PASSENGER COMPARTMENT WINDOWS - DESCRIPTION AND OPERATION

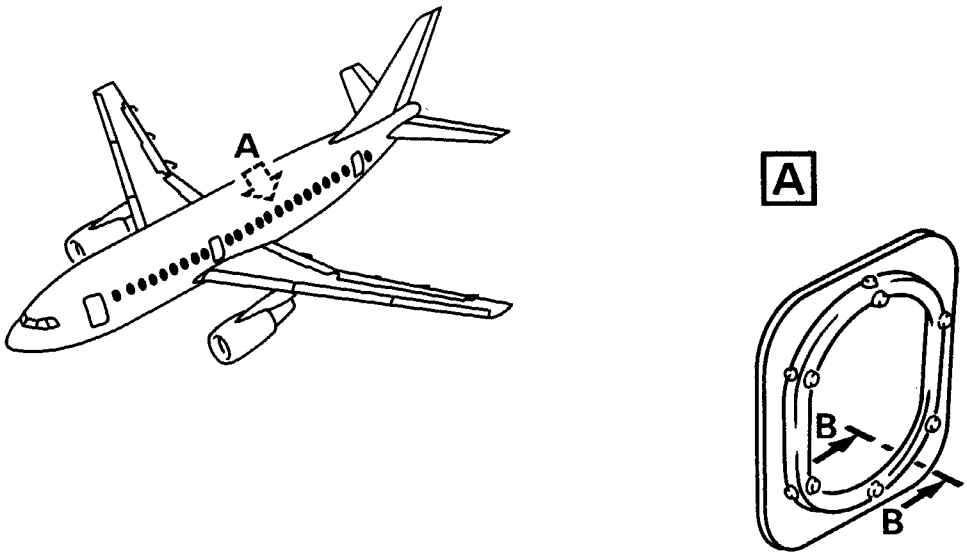
1. General

A. The passenger compartment windows are located along the fuselage sides between the structure frames and are flush with the fuselage skin.

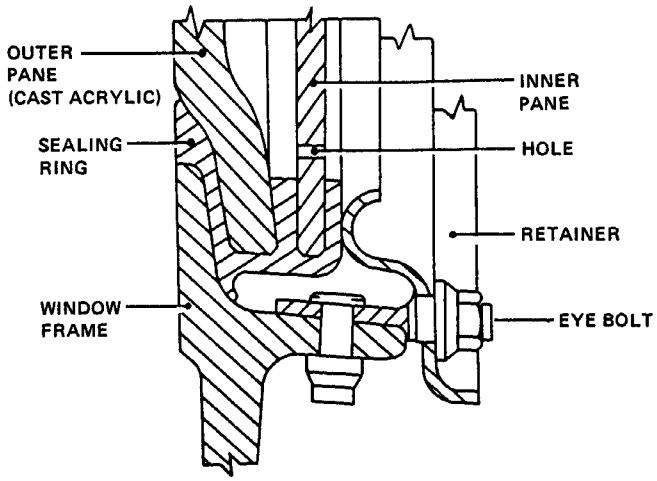
2. Description

A. Passenger Compartment Windows
(Ref. Fig. 001, 002)
(1) The window assembly comprises an inner pane of stretched acrylic and an
R outer pane of colorless stretched acrylic, retained by a sealing
R ring.
(2) The different types of outer panes and their sealing rings are not interchangeable.
(3) A hole through the inner pane maintains cabin pressure within the window assembly.
(4) The window assembly is positioned with the hole in the inner pane at the lowest point of the assembly and attached to the window frame by a retainer secured by eye bolts and nuts.

B. Passenger Compartment Dummy Window
(Ref. Fig. 003)
(1) Dummy windows are installed in locations where access to the normal windows is obstructed by furnishings or equipment, e.g. galleys, toilets, etc..
(2) The dummy window assembly comprises an outer plate with or without spacers manufactured from metal, retained by a sealing ring.
NOTE : Dummy window assemblies with or without spacers are interchangeable.
(3) The assembly is attached to the window frame by a retainer secured by eye bolts and nuts.



SECTION
B-B



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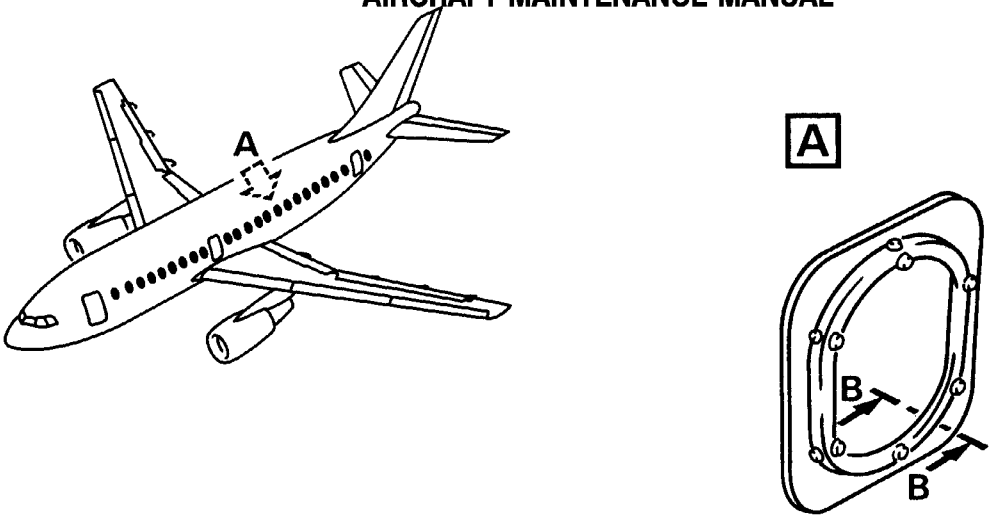
Window Assembly (Cast Acrylic)
Figure 001



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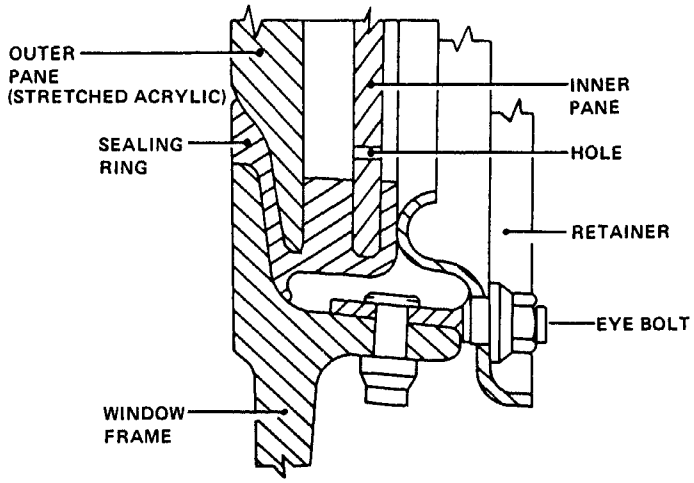

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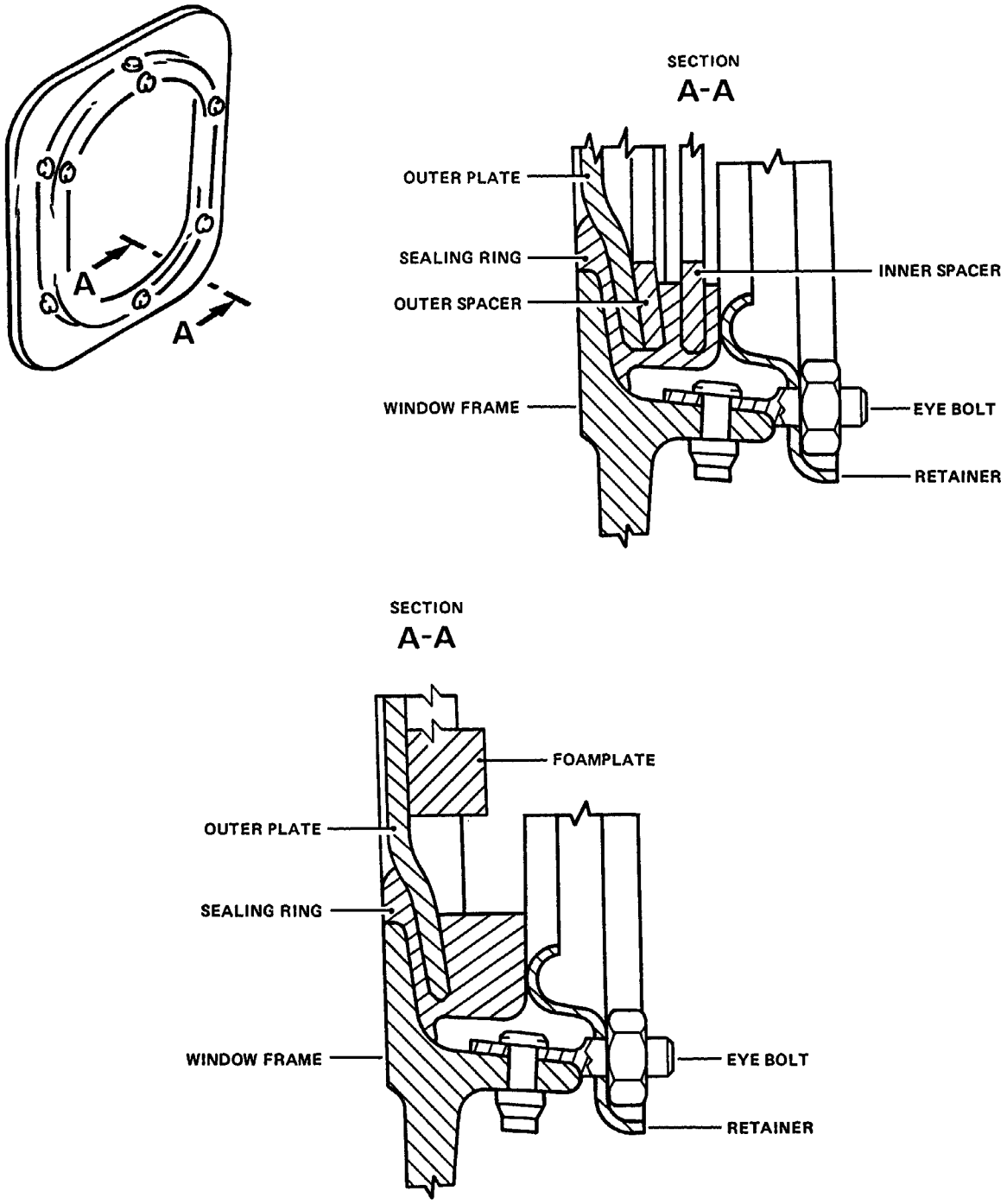
Window Assembly (Stretched Acrylic)
Figure 002



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NOTE: BOTH WINDOW ASSEMBLIES ARE INTERCHANGEABLE

R Dummy Window Assembly
Figure 003

WINDOWS - SPECIAL PRECAUTIONS

1. General

A. This topic highlights procedures which must be carried out during maintenance on cabin and door windows.

2. Procedure

A. Before maintenance:

CAUTION : WEAR COTTON GLOVES WHEN HANDLING WINDOWS AND ASSEMBLIES.
DO NOT DAMAGE SURFACE PROTECTION OF RETAINER.
RECORD LOCATION OF WINDOW ASSEMBLY IN WINDOW FRAME.

B. During maintenance:

CAUTION : WEAR COTTON GLOVES WHEN HANDLING WINDOWS AND ASSEMBLIES.
USE SPECIFIED CLEANING MATERIALS ONLY.
RECORD LOCATION OF PANES IN SEAL.
RUBBING WINDOW SURFACES WITH DRY CLOTH CAUSES SCRATCHES AND INTRODUCES STATIC CHARGING WHICH ATTRACTS DUST.
HOLE IN INNER PANE MUST NOT BE OBSTRUCTED.
INCORRECT ASSEMBLY OF WINDOW CAN RESULT IN DAMAGE TO PANES AND SEAL AND MAY CAUSE LEAKAGE.
REMOVED WINDOW PANES MUST BE PLACED IMMEDIATELY IN A PROTECTIVE COVER.
DO NOT REMOVE PROTECTIVE COATING FROM OUTER FACE OF NEW OUTER PANES BEFORE INSTALLATION IS COMPLETED.

C. After maintenance:

CAUTION : WEAR COTTON GLOVES WHEN HANDLING WINDOWS AND ASSEMBLIES.
DO NOT DAMAGE SURFACE PROTECTION OF RETAINER.
WINDOW ASSEMBLY MUST BE CENTRAL IN WINDOW FRAME AND OUTER BEAD OF SEALING RING MUST PROJECT BY SAME AMOUNT AROUND WHOLE WINDOW FRAME.
HOLE IN INNER PANE MUST NOT BE OBSTRUCTED.

PASSENGER COMPARTMENT WINDOW ASSEMBLY REMOVAL/INSTALLATION

CAUTION : SPECIAL PRECAUTIONS MUST BE FOLLOWED WHEN CARRYING OUT MAINTENANCE ON WINDOW ASSEMBLIES (REF. 56-21-00, P. BLOCK 301).

1. Reason for the Job

A. Removal for cleaning inner surfaces of inner and outer panes

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 3.90 m (13.0 ft.)
B.	Torque Wrench, up to 0.8 m.daN (70.8 lbf.in.)
C.	Boiled Glove Cloth
D.	Chamois Leather
E.	Cord, 2.0 mm (0.08 in.) dia.
F.	Liquid Soap
G.	Sponge
H.	Safetying Device
J. Material No. 05-012	Special Materials (Ref. 20-31-00)
K. Material No. 09-018	Sealants (Ref. 20-31-00)
Referenced Procedures	
- 25-23-21, P. Block 401	Upper Sidewall Panels
- 51-76-10, P. Block 801	Repair of Sealing
- 56-21-00, P. Block 301	Passenger Compartment Windows - Special Precautions

3. Procedure

A. Job Set-Up
(1)Position access platform.
(2)Remove upper sidewall panels, as required (Ref. 25-23-21, P. Block 401).

B. Removal of Window Assembly (Ref. Fig. 401)
CAUTION : SPECIAL PRECAUTIONS MUST BE FOLLOWED (REF. 56-21-00, P. BLOCK 301).

** ON WINDOW ASSEMBLIES WITH SELF-LOCKING NUTS

(1)Remove nuts (4) and retainer (3).
(2)Not applicable

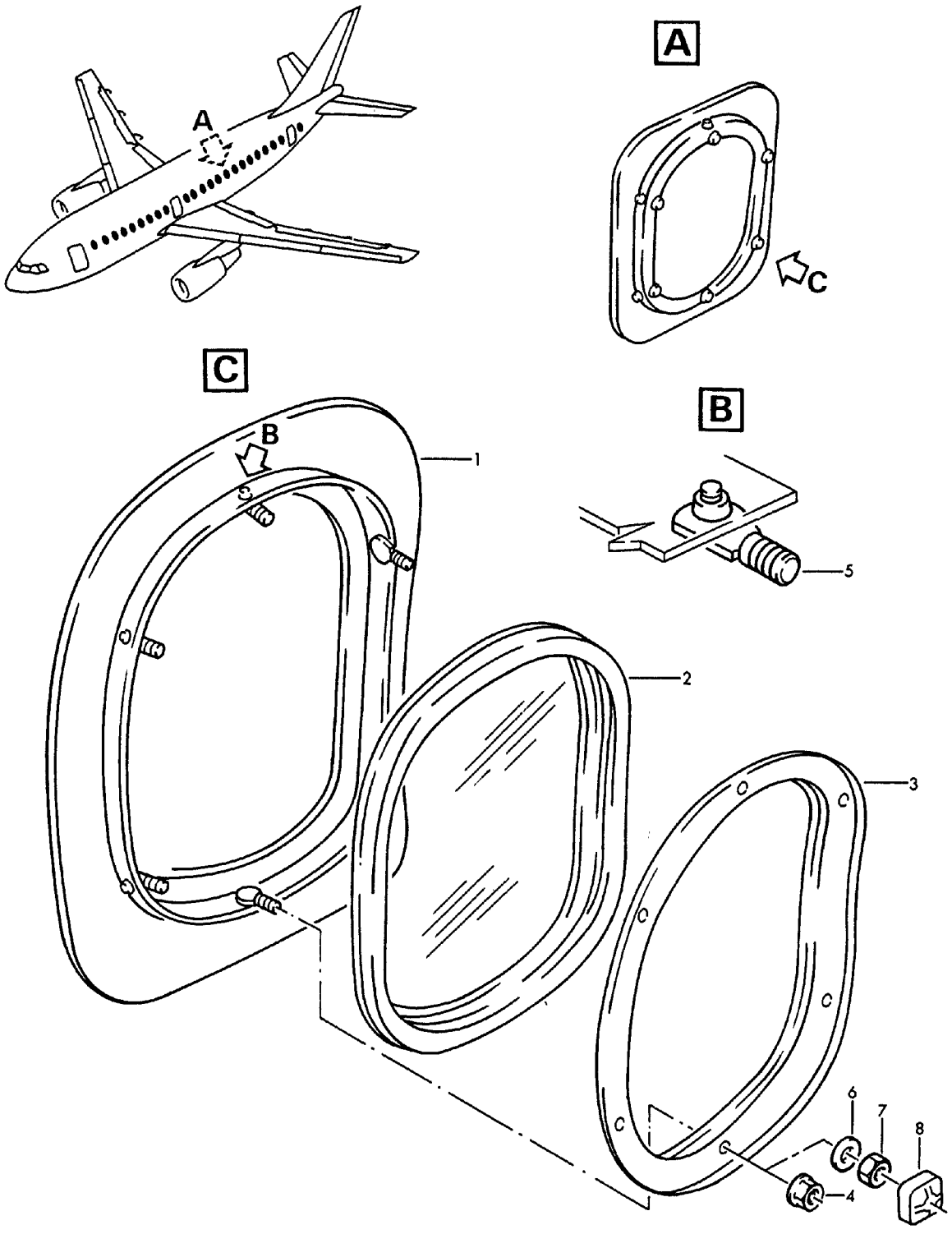
** ON WINDOW ASSEMBLIES WITH SAFETYING DEVICE

(1)Remove and discard safetying device (8).
(2)Remove nuts (7), washers (6) and retainer (3).

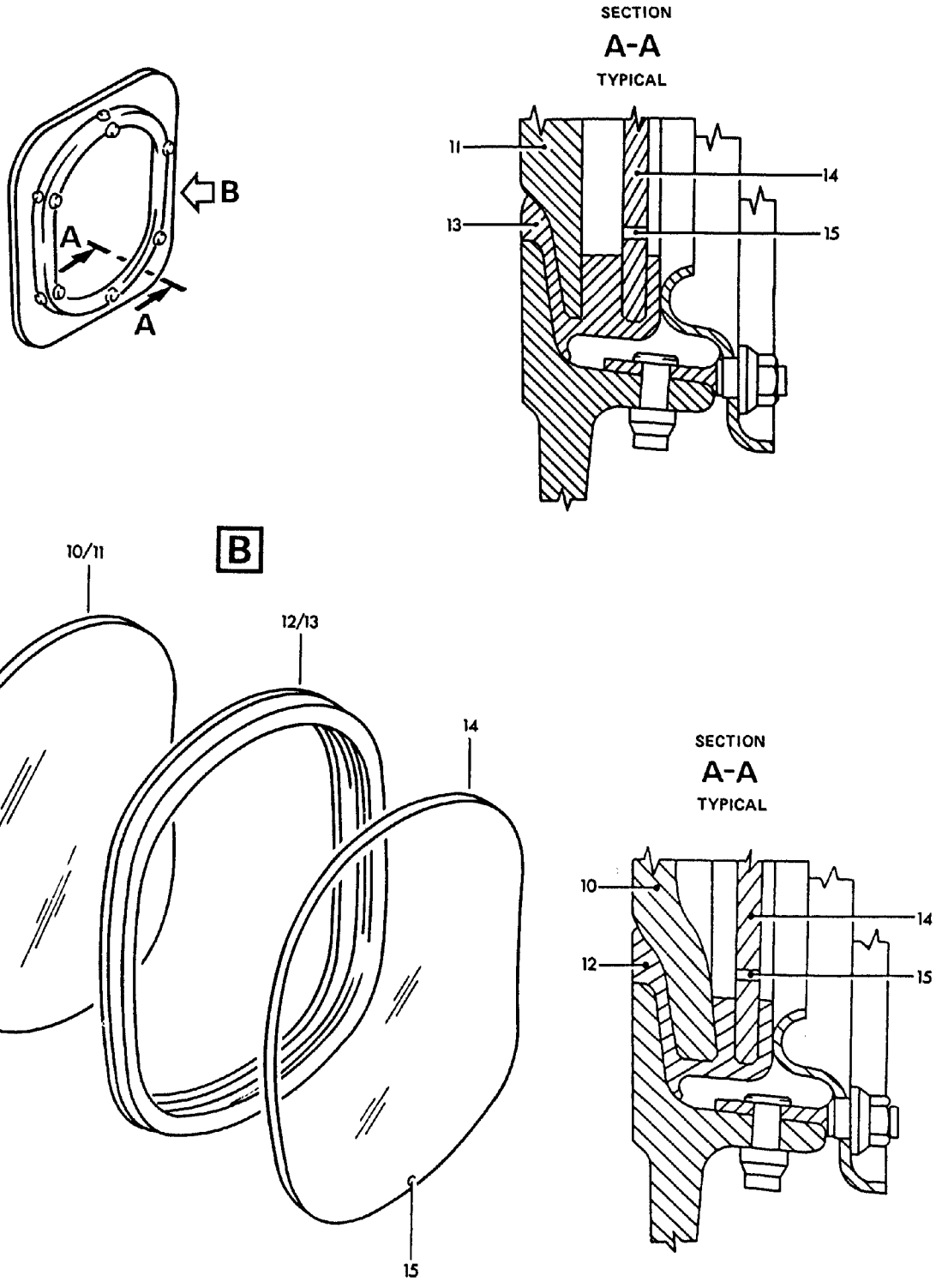
** ON ALL WINDOW ASSEMBLIES

(3)Remove window assembly (2) from window frame (1).

C. Disassembly (Ref. Fig. 402)
CAUTION : SPECIAL PRECAUTIONS MUST BE FOLLOWED (REF. 56-21-00, P. BLOCK 301).
(1)Disassemble window assembly.
(a)Remove inner pane (14) from sealing ring (12 or 13).
(b)Remove outer pane (10 or 11) from sealing ring (12 or 13). Record location of outer pane (10 or 11) in sealing ring (12 or 13) for subsequent installation.



Window Assembly
Figure 401



Window
Figure 402

D. Preparation for Installation (Ref. Fig. 402)
CAUTION : SPECIAL PRECAUTIONS MUST BE FOLLOWED (REF. 56-21-00, P. BLOCK 301).

** ON NEW PANES ONLY

(1)Remove protective coating from inner face of outer pane (10 or 11) and both faces of inner pane (14).

** ON PANES FOR REINSTALLATION

(1)Not applicable

** ON ALL PANES

(2)Clean panes by hand, using liberal quantities of warm water. Make certain that no abrasive matter remains on panes.
(3)Wash panes with mild soap solution, applied with boiled glove cloth, sponge or chamois leather.
(4)Rinse panes with liberal quantities of warm water and dry with clean, damp chamois leather.
(5)If further cleaning is required, proceed as follows:
(a)Apply plastic cleaner (Mat. No. 05-012) and clean panes using boiled glove cloth.
(b)Rinse panes with clean water and dry with clean, damp chamois leather.
(c)Make certain that hole (15) of inner pane (14) is not obstructed.
(6)Apply antistatic treatment.
(a)Mix seven parts cleaner (Mat. No. 05-012) with sixty parts water by volume.
(b)Soak boiled glove cloth with antistatic solution and apply to inner surface of outer pane (10 or 11) and both surfaces of inner pane (14).
(c)Allow panes to dry, and polish with boiled glove cloth, maintaining a light pressure and using brisk straight strokes.
NOTE : Do not wet or mar surfaces of panes after treatment.

E. Assembly (Ref. Fig. 402)
CAUTION : SPECIAL PRECAUTIONS MUST BE FOLLOWED (REF. 56-21-00, P. BLOCK 301).

** ON NEW PANES ONLY

(1)Remove protective coating from edge of outer pane (10 or 11), where pane contacts sealing ring (12 or 13).
(2)Install outer pane (10 or 11) in sealing ring (12 or 13).

** ON PANES FOR REINSTALLATION

(1)Not applicable
(2)Install outer pane (10 or 11) in sealing ring (12 or 13) as previously recorded.

** ON ALL PANES

(3)Install inner pane (14) in sealing ring (12 or 13).

F. Installation (Ref. Fig. 401, 402, 403)

CAUTION : SPECIAL PRECAUTIONS MUST BE FOLLOWED (REF. 56-21-00, P. BLOCK 301).

(1)Position 2.0 mm (0.08 in.) dia. cord (17) around groove (16) in sealing ring (12 or 13) and tie tightly with knot, adjacent to hole of inner pane (14).

(2)Position window assembly (2) in window frame (1). Make certain that hole, of inner pane (14), is positioned at lowest point of window assembly (2) and that ends of cord (17) are not trapped between window assembly (2) and window frame (1).

(3)Position retainer (3).

(4)Apply sealant (Mat. No. 09-018) to threads of eye bolts (5) (Ref. 51-76-10, P. Block 801).

** ON WINDOW ASSEMBLIES WITH SELF-LOCKING NUTS

(5)Install nuts (4) but do not tighten.

** ON WINDOW ASSEMBLIES WITH SAFETYING DEVICE

R (5)Install washers (6) and nuts (7). Do not fully tighten the nuts (7)
R at this time. Only tighten nuts (7) sufficiently to hold the seal
R of window assembly (2) against window frame (1).

** ON ALL WINDOW ASSEMBLIES

(6)Check position of window assembly (2) in window frame (1). Window assembly (2) must be central in window frame (1), and outer bead of sealing ring (12 or 13) must project by same amount around whole window frame (1).

(7)Untie knot in cord (17) and pull LH end of cord (17) from groove (16) in sealing ring (12 or 13). Continue pulling cord (17) clockwise until completely removed, and bead of sealing ring (12 or 13) is evenly seated on edge of window frame (1).

CAUTION : MAKE CERTAIN BEAD IS NOT TRAPPED AND NUTS (4 OR 7) ARE CORRECTLY TORQUED.

** ON WINDOW ASSEMBLIES WITH SELF-LOCKING NUTS

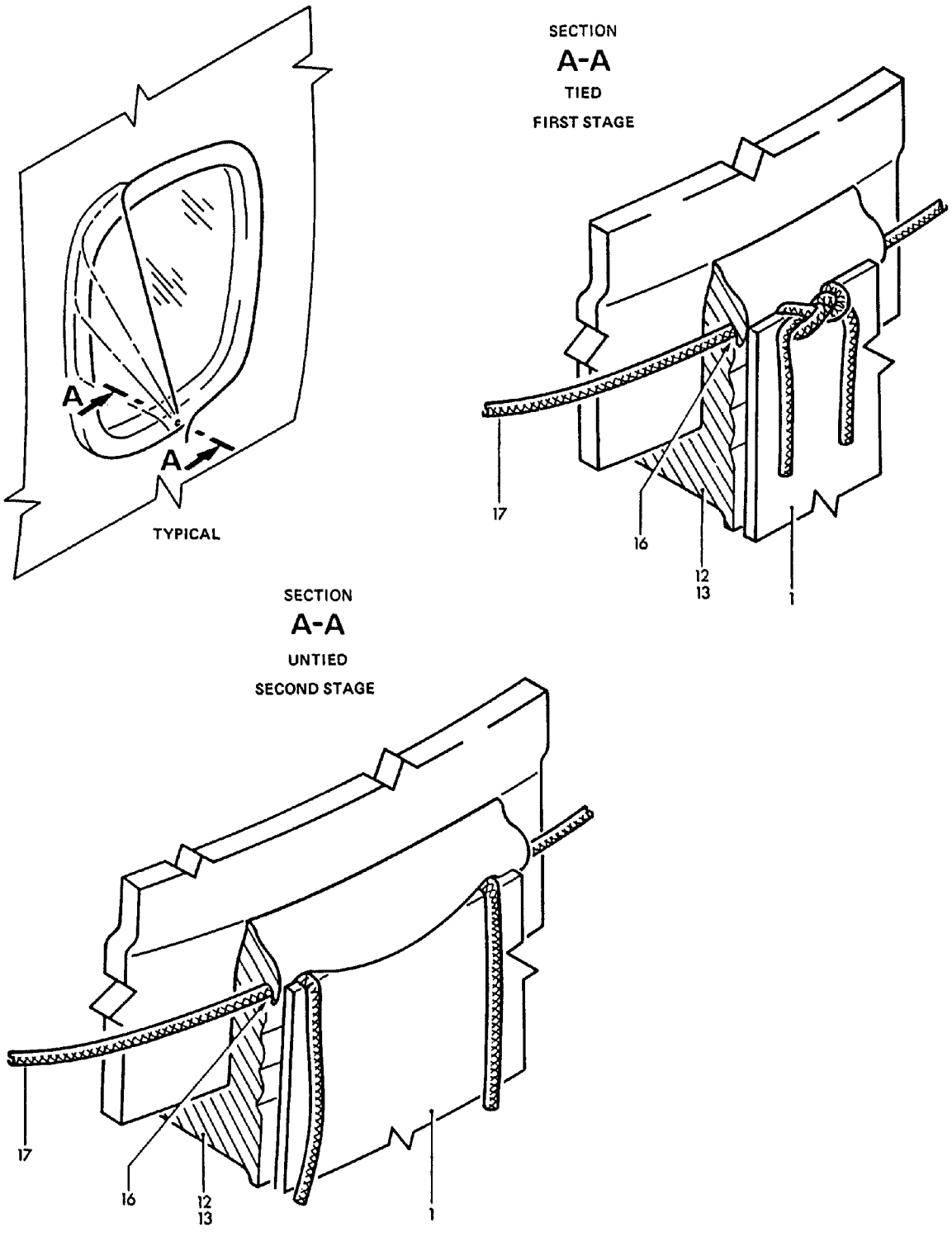
(8)TORQUE nuts (4), in a diagonal sequence, to 0.2 m.daN (17.7 lbf.in.).

(9)Mark nuts (4) and retainer (3) with red marking stripe.

** ON WINDOW ASSEMBLIES WITH SAFETYING DEVICE

(8)TORQUE nuts (7), in a diagonal sequence, to between 0.05 and 0.15 m.daN (4.43 and 13.28 lbf.in.).

(9)Install new safetying devices (8).



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Installation of Window Seal
Figure 403

** ON ALL WINDOW ASSEMBLIES

** ON NEW PANES ONLY

(10)Remove protective coating from outer surface of outer pane (10 or 11).

** ON PANES FOR REINSTALLATION

(10)Not applicable

** ON ALL PANES

G. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install upper sidewall panels (Ref. 25-23-21, P. Block 401).
(3)Remove access platform.

CAUTION : REPLACE CRAZED OR DELAMINATED INNER PANES.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 3.90 m (13.0 ft.)
B.	Flashlight
C.	Magnifying Glass
D.	Transparent Graph Paper

Referenced Procedures

- 25-23-21, P. Block 401	Upper Sidewall Panels
- 51-74-10, P. Block 801	Removal of Corrosion
- 51-75-10, P. Block 801	Repair of Paint Coatings
- 56-21-11, P. Block 401	Passenger Compartment Window Assembly

2. Procedure

A. Job Set-Up
(1)Position access platform.
(2)Remove ancillary equipment, as required.
(3)Remove upper sidewall panels (Ref. 25-23-21, P. Block 401).

B. Possible Types of Damage (Ref. Fig. 601, 602)
(1)Crazing: Multidirectional type of crazing.
(2)Fine scratch: Possibility of crack formation.
(3)Deep scratch or surface crack: Without crazing.
(4)Fine scratch or surface crack: With crazing.
(5)Crack: Extending through the complete material thickness.
(6)Crazing: Unidirectional type of crazing e.g. star, line or crater crazing.
(7)Bulging.
(8)Pitting.
R
R
R
(9)Delamination: Slate like separation of material.
(10)Orange peel effect.
(11)Chipping.
R
R
R

NOTE : All defects clearly visible under normal daylight conditions. Any combination and/or overlapping of damage is possible.

C. Inspection Method (Ref. Fig. 603)

NOTE : Inspection of panes may be carried out with window assembly installed or removed.

(1)Measure length of damage as follows:

(a)Place graph paper on windowpane to be inspected.

NOTE : Graph paper lines should be approx. 0.1 mm (0.004 in.) thick.

(b)Position light source at 90- to opposite surface of windowpane.

(c)Switch on light source.

(d)Length of damage appears as dark line on graph paper. Mark extremities of line and measure distance between points.

(2)Measure depth of damage as follows:

(a)Place graph paper on windowpane to be inspected.

NOTE : Graph paper lines should be approx. 0.1 mm (0.004 in.) thick.

(b)Position light source at 45- to opposite surface of windowpane and 90- to longitudinal axis of damage.

(c)Switch on light source.

(d)Depth of damage appears as dark area on graph paper. Mark outline of damage on graph paper and measure distance at maximum depth.

R

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R

R (e)Multiply dimension obtained by a factor of 1.6 to obtain true depth.

R

R

R

(f)Should depth of damage exceed stated limits, windowpane must be replaced.

D. Inspection of Windowpanes

R (Ref. Fig. 604)

NOTE : Windowpanes must be inspected from different angles to detect defects using flashlight and magnifying glass.

(1)Cracks

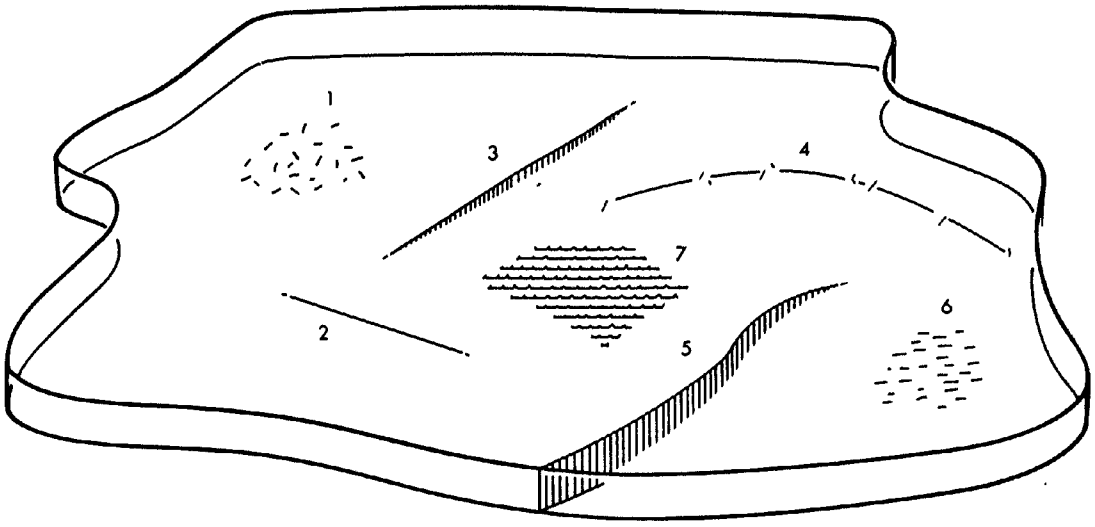
(a)Examine windowpanes for cracks. Cracked windowpanes must be replaced (Ref. 56-21-11, P. Block 401).

(2)Crazing

CAUTION : CRAZED INNER PANES MUST BE REPLACED.

(a)Inspect inner and outer panes for crazing.

(b)Should crazing exceed stated limit, windowpanes must be replaced (Ref. 56-21-11, P. Block 401).



1	CRAZING: MULTIDIRECTIONAL TYPE OF CRAZING.
2	FINE SCRATCH: POSSIBILITY OF CRACK FORMATION
3	DEEP SCRATCH OR SURFACE CRACK: WITHOUT CRAZING.
4	FINE SCRATCH OR SURFACE CRACK: WITH CRAZING.
5	CRACK: EXTENDING THROUGH COMPLETE MATERIAL THICKNESS (SHOWN DECREASING TO ZERO AT END OF CRACK).
6	CRAZING: UNIDIRECTIONAL TYPE OF CRAZING E.G. STAR, LINE OR CRATER.
7	ORANGE PEEL EFFECT: SURFACE DAMAGE

NOTE: ALL DEFECTS CLEARLY VISIBLE UNDER NORMAL DAYLIGHT CONDITIONS.
ANY COMBINATION AND/OR OVERLAPPING OF DAMAGE IS POSSIBLE.

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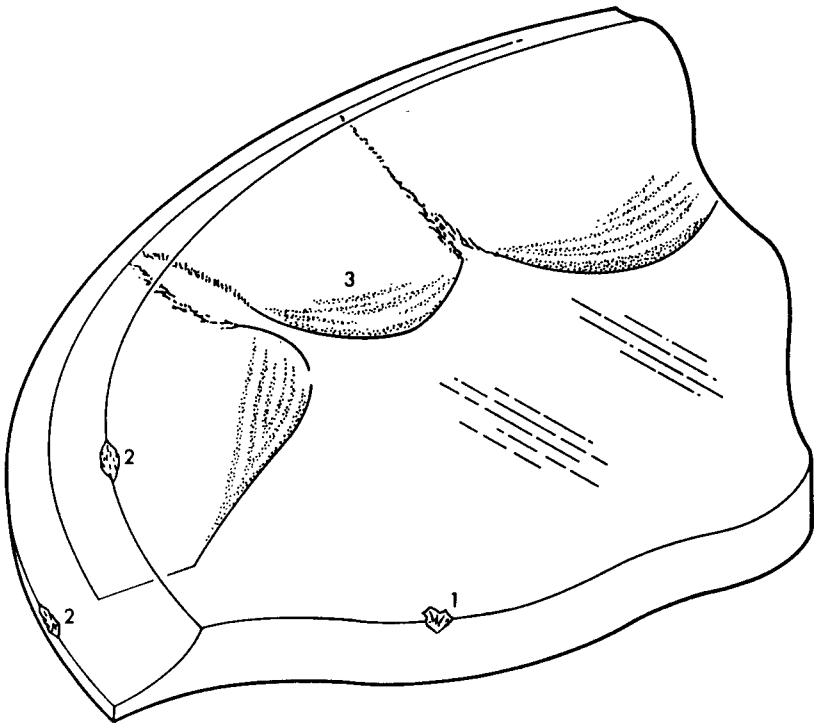
Possible Types of Damage
Figure 601



1	PITTING: INPACT DAMAGE
2	CHIPPING: EDGE DAMAGE
3	DELAMINATION: PARALLEL TO SURFACE
	NOTE: ALL DEFECTS CLEARLY VISIBLE UNDER NORMAL DAYLIGHT CONDITIONS. ANY COMBINATION AND/OR OVERLAPPING OF DAMAGE IS POSSIBLE.

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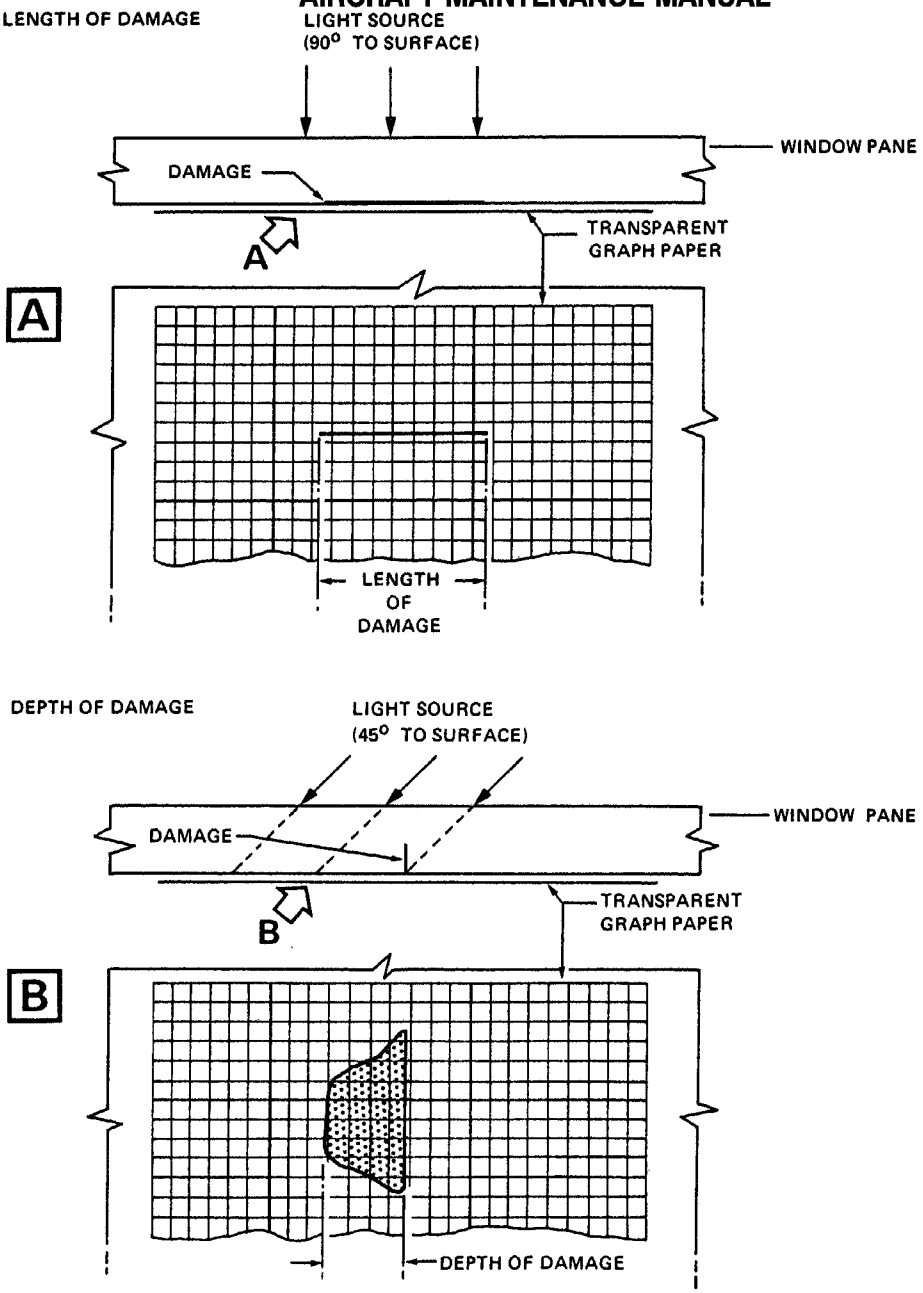
R

Possible Types of Damage
Figure 602



NOTE: ON CAST ACRYLIC PANES
TRUE DEPTH = DEPTH x 1.4

ON STRETCHED ACRYLIC PANES
TRUE DEPTH = DEPTH x 1.6

B M 6 56 21 11 6 AE M 0–16

Inspection Method
Figure 603

CONDITION		OUTER PANE MEASUREMENTS	INNER PANE MEASUREMENTS
DESIGN THICKNESS		9.5+/-0.5mm (0.374+/-0.02 in.)	4+0.4/-0.6mm (0.16+0.016/-0.024 in.)
MINIMUM THICKNESS AFTER REPAIR		7.00mm (0.276 in.)	3.00mm (0.118 in.)
DELAMINATION	MAXIMUM AREA	REFER TO NOTE (3)	NOT PERMITTED
EDGE CRACKING	MAXIMUM WIDTH IN TRANSPARENT AREA	4.00mm (0.157 in.)	NOT PERMITTED
SCRATCHES	MAXIMUM DEPTH	0.15mm (0.006 in.)	0.15mm (0.006 in.)
PITTING	MAXIMUM DEPTH	0.4mm (0.016 in.)	NOT PERMITTED
CRAZING REWORKING BY HAND	MAXIMUM DEPTH	0.2mm (0.008 in.)	NOT PERMITTED
CRAZING REWORKING BY MACHINING (1)	MAXIMUM DEPTH	0.4mm (0.016 in.)	NOT PERMITTED
BULGING TO THE OUTSIDE	MAXIMUM HEIGHT OF BULGE	4.0mm (0.157 in.) REFER TO NOTE (2)	2.0mm (0.079 in.) REFER TO NOTE (2)
BULGING TO THE INSIDE	MAXIMUM HEIGHT OF BULGE	4.0mm (0.157 in.) REFER TO NOTE (2)	2.0mm (0.079 in.) REFER TO NOTE (2)
ORANGE PEEL EFFECT		NOT PERMITTED	NOT PERMITTED
CHIPPING		NOT PERMITTED	NOT PERMITTED
CRACKS		NOT PERMITTED	NOT PERMITTED

NOTES:
1/ ONLY APPROVED FIRMS ARE ALLOWED TO REWORK THE PANES BY MACHINING WHICH HAVE CRAZING MORE THAN 0.2mm (0.008 in.)

2/ REPLACE THE WINDOW PANE WHEN THE HEIGHT OF THE BULGE IS MORE THAN THE PERMITTED LIMIT

3/ REPLACE THE WINDOW PANE WITH DELAMINATION IN THE AREA WHICH IS NOT COVERED BY THE RUBBER SEAL

BM6 56 21 11 6 ACM0 02

Windowpane Damage Criteria
(Stretched Acrylic Outer Pane)
Figure 604

(3)Scratches
(a)Inspect inner and outer windowpanes for scratches.
(b)Should scratches exceed stated limit, windowpanes must be replaced (Ref. 56-21-11, P. Block 401).
(4)Bulging
(a)Check outer windowpanes for bulging.
(b)For bulging damage, cabin windows need to be removed. (Ref. CMM 56-21-11, Para. C.), for bulging measurement process.
(c)Should height of bulge exceed stated limits, outer windowpane must be replaced (Ref. 56-21-11, P. Block 401).
(d)Make certain that hole in inner windowpane is not obstructed.
(5)Delamination (Ref. Fig. 602)
CAUTION : DELAMINATED INNER PANES MUST BE REPLACED.

** ON STRETCHED ACRYLIC OUTER PANES ONLY

CAUTION : DELAMINATED OUTER PANES EXCEEDING STATED LIMIT MUST BE REPLACED.

(a)Inspect windows for signs of slate like separation of material.

R

(6)Orange peel effect (Ref. Fig. 604, 601)
CAUTION : INNER AND OUTER PANES WITH ORANGE PEEL EFFECT MUST BE REPLACED.
(a)Inspect inner and outer panes for orange peel effect.
(7)Chipping (Ref. Fig. 602)
CAUTION : INNER AND OUTER PANES WITH CHIPPING MUST BE REPLACED.
(a)Inspect inner and outer panes for chipping.
(8)Pitting (Ref. Fig. 602)
(a)Inspect outer panes for pitting.
(9)Inspection of Window Assembly (Installed)

** ON WINDOW ASSEMBLIES WITH SELF LOCKING NUTS

(a)Make certain by means of telltale marks, that all nuts on window frame are tight. Tighten as required (Ref. 56-21-11, P. Block 401).
(b)Inspect sealant around window frame nuts for condition and security of attachment. Damaged sealant must be replaced (Ref. 56-21-11, P. Block 401).

** ON WINDOW ASSEMBLIES WITH SAFETYING DEVICE

(a)Check locking device for serviceability and renew if necessary (Ref. 56-21-11, P. Block 401).
(b)Not applicable.

** ON ALL WINDOW ASSEMBLIES

(10)Inspection of Window Assembly (Removed)
(a)Remove window assembly (Ref. 56-21-11, P. Block 401).

(b)Examine window seal for damage and material deterioration. Damaged seal must be replaced (Ref. 56-21-11, P. Block 401).
(c)Inspect retainer for corrosion and satisfactory paint coatings.
1 Corrosion damage of window retainer, up to a depth of 0.2 mm (0.008 in.) must be repaired. Should stated limit be exceeded, retainer must be replaced (Ref. 56-21-11, P. Block 401).
2 Corrosion in holes of window retainer must be repaired, but diameter of holes must not exceed 8.0 mm (0.32 in.). Should stated limit be exceeded, retainer must be replaced (Ref. 56-21-11, P. Block 401).
3 For the removal of corrosion refer to 51-74-10, P. Block 801.
4 For the repair of paint coatings refer to 51-75-10, P. Block 801.
(d)Install window assembly (Ref. 56-21-11, P. Block 401).

E. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install upper sidewall panels (Ref. 25-23-21, P. Block 401).
(3)Install ancillary equipment, if removed.
(4)Remove access platform.

PASSENGER COMPARTMENT WINDOWS - CLEANING

CAUTION : RUBBING SURFACE OF PANES WITH A DRY CLOTH CAUSES SCRATCHES AND BUILDS UP AN ELECTROSTATIC CHARGE WHICH ATTRACTS DUST PARTICLES. THE USE OF INCORRECT CLEANING METHODS MAY LEAD TO FAILURE OF THE WINDOW. USE SPECIFIED CLEANING MATERIALS ONLY.

1. Reason for the Job

A. Cleaning outer surface of outer pane.
NOTE : For cleaning inner surface of outer pane, both surfaces of inner pane and application of anti-static solution to panes, refer to 56-21-11, P. Block 401.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 3.90 m (13.0 ft.)
B.	Boiled Glove Cloth
C.	Chamois Leather
D.	Soap
E.	Sponge
F. Material No. 05-012	Special Materials (Ref. 20-31-00)
Referenced Procedure - 56-21-11, P. Block 401	Passenger Compartment Window Assembly

3. Procedure

A. Job Set-Up
(1)Position access Platform.

B. Cleaning
CAUTION : DO NOT RUB SURFACES WITH DRY CLOTH. USE SPECIFIED CLEANING MATERIAL ONLY.
(1)Clean pane by hand, using liberal quantities of warm water. Make certain that no abrasive matter remains on pane.
(2)Wash pane with mild soap solution applied with boiled glove cloth, sponge or chamois leather.
(3)Rinse pane with liberal quantities of warm water and dry with a clean damp chamois leather.
(4)If further cleaning is required, proceed as follows:
(a)Apply plastic cleaner (Mat. No. 05-012) and clean pane, using boiled glove cloth.
(b)Rinse pane with clean water, and dry with clean, damp chamois leather.

C. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Remove access platform.

PASSENGER COMPARTMENT DUMMY WINDOW ASSEMBLY REMOVAL/INSTALLATION

CAUTION : INCORRECT ASSEMBLY OF DUMMY WINDOW MAY CAUSE LEAKAGE.
TAKE CARE NOT TO DAMAGE SURFACE PROTECTION OF RETAINER, WHEN REMOVING RETAINER FROM THREADED BOLTS.

NOTE : Dummy window assemblies with or without spacers are interchangeable.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 3.90 m (13.0 ft.)
B.	Torque Wrench, up to 0.8 m.daN (70.8 lbf.in.)
C.	Cord, 2.0 mm (0.08 in.) dia.
D.	Safetying Device
E. Material No. 09-018	Sealants (Ref. 20-31-00)
Referenced Procedure - 51-75-10, P. Block 801	Repair of Paint Coatings

2. Procedure

A. Job Set-Up
(1)Position access platform.
(2)Remove equipment and furnishing, as required.

B. Removal of Dummy Window Assembly (Ref. Fig. 401)

** ON DUMMY WINDOW ASSEMBLIES WITH SELF LOCKING NUTS

(1)Remove nuts (5) and retainer (4).
(2)Not applicable

** ON DUMMY WINDOW ASSEMBLIES WITH SAFETYING DEVICE

(1)Remove and discard safetying device (8).
(2)Remove nuts (7), washers (6) and retainer (4).

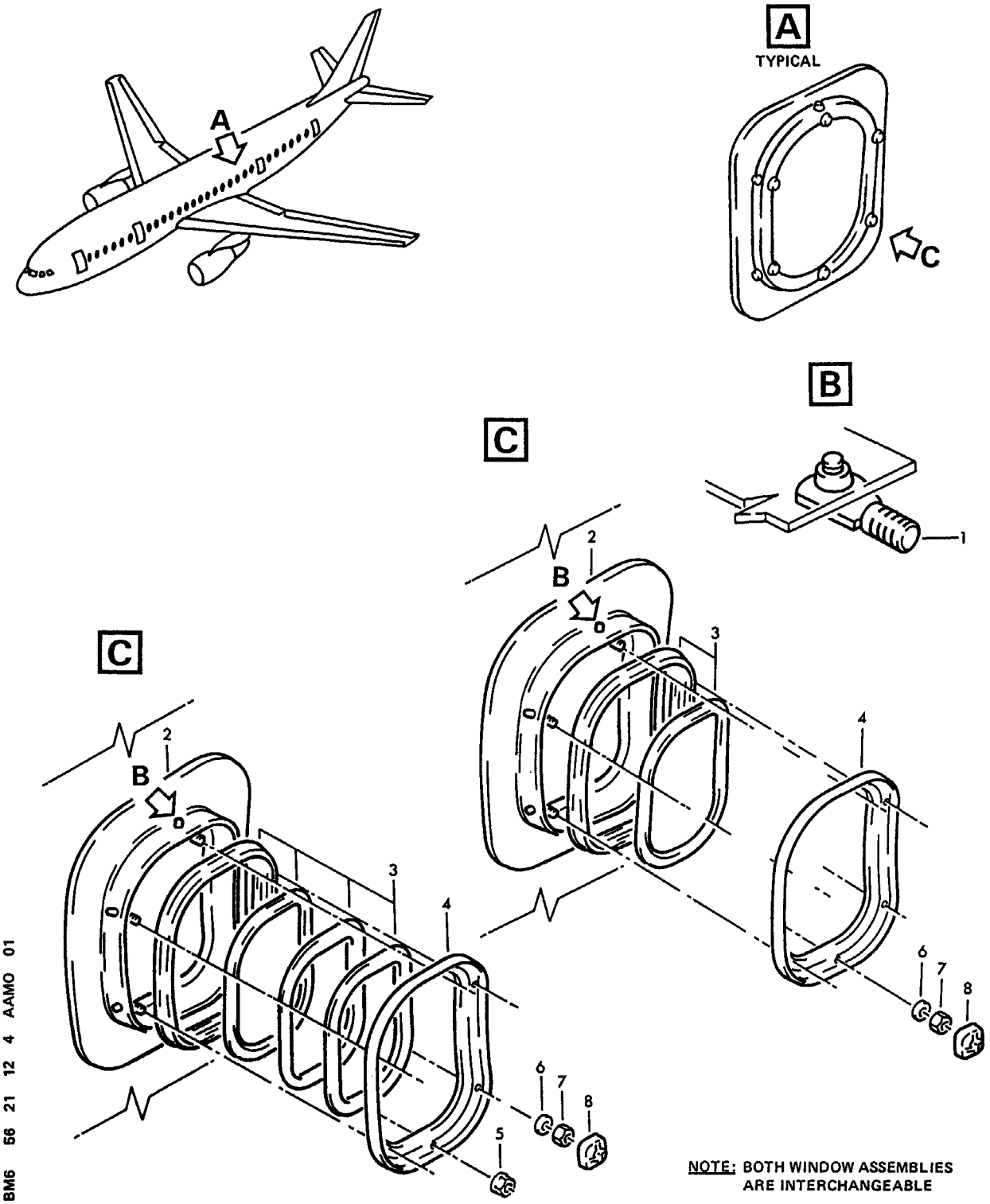
** ON ALL DUMMY WINDOW ASSEMBLIES

(3)Remove dummy window assembly (3) from window frame (2).
NOTE : Record location of dummy window assembly (3) on window frame (2) for subsequent installation.

C. Disassembly (Ref. Fig. 402)

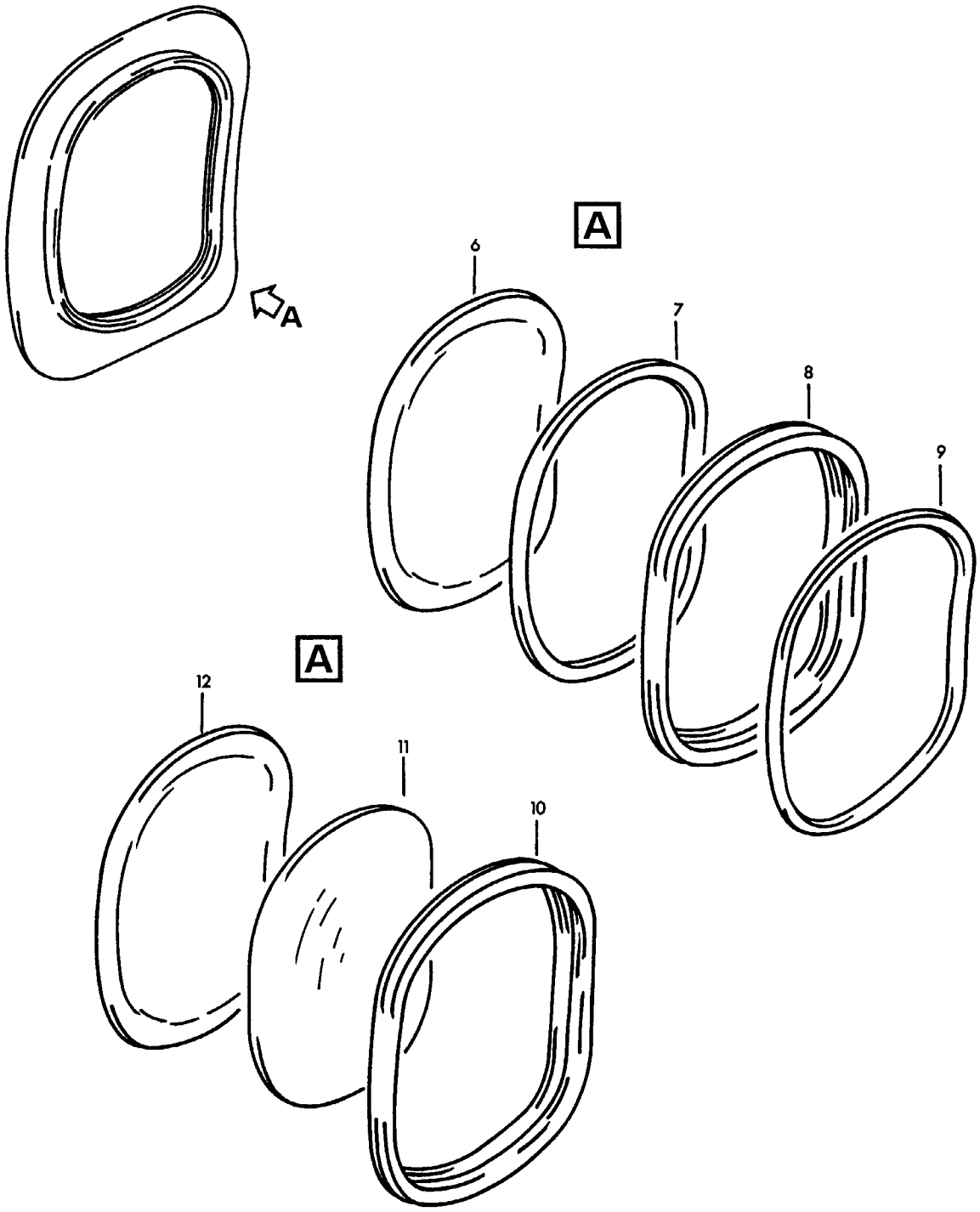
** ON DUMMY WINDOW ASSEMBLIES WITH SPACERS

(1)Disassemble dummy window assembly.
(a)Remove inner spacer (9) from sealing ring (8).



Dummy Window
Figure 401

R



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NOTE: BOTH WINDOW ASSEMBLIES ARE INTERCHANGEABLE

R

Dummy Window Assembly
Figure 402

NOTE : Record location of inner spacer (9) on sealing ring (8) for subsequent installation.

(b)Remove plate (6) and outer spacer (7) from sealing ring (8).

NOTE : Record location of plate (6) and outer spacer (7) on sealing ring (8) for subsequent installation.

** ON DUMMY WINDOW ASSEMBLIES WITHOUT SPACERS

(1)Disassemble dummy window assembly.

(a)Remove plate (12) from sealing ring (10).

NOTE : Record location of plate (12) on sealing ring (10) for subsequent installation.

D. Preparation for Installation (Ref. Fig. 402)

** ON DUMMY WINDOW ASSEMBLIES WITH SPACERS

(1)Clean dummy window plate (6) and spacers (7, 9) (Ref. 51-75-10, P. Block 801).

** ON DUMMY WINDOW ASSEMBLIES WITHOUT SPACERS

(1)Check adhesive foam plate (11) on dummy window plate (12) for good condition and renew if necessary.

(2)Clean dummy window plate (12) (Ref. 51-75-10, P. Block 801).

E. Assembly (Ref. Fig. 402)

CAUTION: INCORRECT ASSEMBLY OF DUMMY WINDOW CAN CAUSE LEAKAGE.

** ON DUMMY WINDOW ASSEMBLIES WITH SPACERS

(1)Assemble dummy window.

(a)Install outer spacer (7) and plate (6) in sealing ring (8) as previously recorded.

(b)Install inner spacer (9) in sealing ring (8) as previously recorded.

** ON DUMMY WINDOW ASSEMBLIES WITHOUT SPACERS

(1)Assemble dummy window.

(a)Install plate (12) in sealing ring (10) as previously recorded.

** ON ALL DUMMY WIDNOW ASSEMBLIES

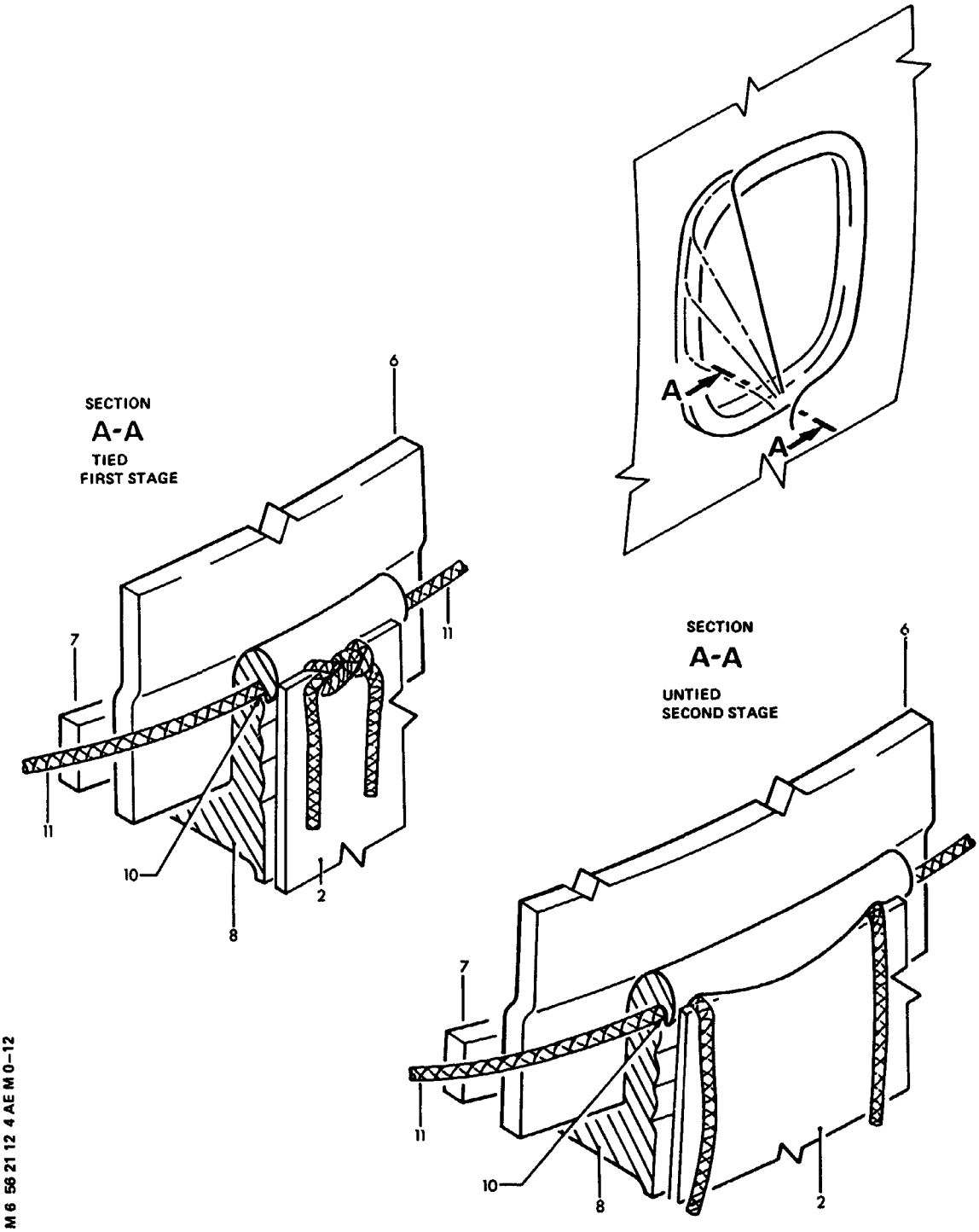
F. Installation (Ref. Fig. 401, 403)

(1)Position 2.0 mm (0.08 in.) dia. cord (11) around groove (10) in sealing ring (8) and tie tightly with knot.

(2)Position dummy window assembly (3) in window frame (2) as previously recorded. Make certain that ends of cord (11) are not trapped between dummy window assembly (3) and window frame (2).

(3)Position retainer (4).

(4)Apply sealant (Mat. No. 09-018) to thread of eye bolts (1).



Installation of Dummy Window
Figure 403

** ON DUMMY WINDOW ASSEMBLIES WITH SELF LOCKING NUTS

(5)Install nuts (5) but do not tighten.

** ON DUMMY WINDOW ASSEMBLIES WITH SAFETYING DEVICE

(5)Install washers (6) and nuts (7). Do not tighten nuts (7).

** ON ALL DUMMY WINDOW ASSEMBLIES

(6)Check position of dummy window assembly (3) in window frame (2). Dummy window assembly (3) must be central in window frame (2), and outer bead of sealing ring (8) must project by same amount around whole window frame (2).
(7)Untie knot in cord (11) and pull LH end of cord (11) from groove (10) in sealing ring (8). Continue pulling cord (11) clockwise until completely removed and bead of sealing ring (8) is evenly seated on edge of window frame (2).

CAUTION : MAKE CERTAIN BEAD IS NOT TRAPPED AND NUTS (5 OR 7) ARE CORRECTLY TORQUED.

** ON DUMMY WINDOW ASSEMBLIES WITH SELF LOCKING NUTS

(8)TORQUE nuts (5), in a diagonal sequence to 0.2 m.daN (17.7 lbf.in.) above running torque of nuts (5).
(9)Mark nuts (5) and retainer (4) with red marking stripe.

** ON DUMMY WINDOW ASSEMBLIES WITH SAFETYING DEVICE

(8)TORQUE nuts (7), in a diagonal sequence, to between 0.05 and 0.15 m.daN (4.43 and 13.28 lbf.in.)
(9)Install new safetying devices (8).

** ON ALL DUMMY WINDOW ASSEMBLIES

G. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install equipment and furnishings, as required.
(3)Remove access platform.

PASSENGER COMPARTMENT DUMMY WINDOW ASSEMBLY INSPECTION/CHECK

R **CAUTION** : PERCENTAGE (%) OF ALLOWABLE DAMAGE IS ALWAYS RELATED TO THE NOMINAL
R MATERIAL THICKNESS AS SPECIFIED IN SRM (STRUCTURAL REPAIR MANUAL).

CAUTION : FOR DUMMY WINDOW ASSEMBLY WITHOUT SPACERS. IF FOAM PLATE ON DUMMY WINDOWPANE SHOULD BE DAMAGED, CHECK DUMMY WINDOWPANE AREA BEHIND FOAM PLATE FOR DAMAGE AND RENEW FOAM PLATE.

NOTE : Should a defect be suspected during the following inspection/check of dummy window assembly, an approved nondestructive test must be carried out.
If a defect is subsequently proved to exist, component must be replaced.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 3.90 m (13.0 ft.)

Referenced Procedures

- 51-73-10, P. Block 801	Repair of Minor Damage
- 51-74-10, P. Block 801	Removal of Corrosion
- 51-75-10, P. Block 801	Repair of Paint Coatings
- 56-21-12, P. Block 401	Passenger Compartment Dummy Window Assembly
R	NTM - Nondestructive Testing Manual
R	SRM - Structural Repair Manual

2. Procedure

A. Job Set-Up
(1)Position access platform.
(2)Remove equipment and furnishings, as required.

R B. Inspection of Dummy Window Assembly with or without Spacers

(1)The following components have specific damage criteria:

(a)Dummy windowpane

R (b)Spacers if installed

(c)Damage limits for steps (a) and (b) are as follows:

Scratches

- 10 % of material thickness. Max. length 100 mm (3.94 in.).

Corrosion and Marks

- 10 % of material thickness. Max. area 400 mm² (0.62 sq.in.).

Cracks and Dents

- Not permitted

(d)Retainer

(e)Damage limits for step (d) are as follows:

Scratches

- Max. depth 0.2 mm (0.008 in.).

Corrosion and Marks

- Max. depth 0.2 mm (0.008 in.).

Cracks and Dents

- Not permitted

(2)Should damage limits be exceeded, component must be replaced (Ref. 56-21-12, P. Block 401).

(a)For the removal of scratches, marks and dents refer to 51-73-10, P. Block 801.

(b)For the removal of corrosion refer to 51-74-10, P. Block 801.

(c)For the repair of paint coatings refer to 51-75-10, P. Block 801.

(3)Inspection of dummy window assembly (installed)

(a)Inspect dummy windowpane for damage, cracks, corrosion and paint damage.

** ON DUMMY WINDOW ASSEMBLIES WITH SELF LOCKING NUTS

(b)Make certain, by means of telltale marks, that all nuts on window frame are tight. Tighten as required (Ref. 56-21-12, P. Block 401).

(c)Inspect sealant around window frame nuts for condition and security of attachment. Damaged sealant must be replaced (Ref. 56-21-12, P. Block 401).

** ON DUMMY WINDOW ASSEMBLIES WITH SAFETYING DEVICE

(b)Check locking device for serviceability and renew if necessary (Ref. 56-21-12, P. Block 401).

(c)Not applicable

** ON ALL DUMMY WINDOW ASSEMBLIES

(4)Inspection of dummy window assembly (removed)

(a)Remove dummy window assembly (Ref. 56-21-12, P. Block 401).

R (b)Inspect dummy windowpane, spacers if installed and retainer for damage, cracks, corrosion and paint damage.

(c)Inspect window seal for damage and material deterioration. Damaged seal must be replaced (Ref. 56-21-12, P. Block 401).

(d)Inspect holes of window retainer for corrosion. Corrosion in holes of window retainer must be repaired, but diameter of holes must not exceed 8.0 mm (0.32 in.). Should stated limit be exceeded, retainer must be replaced (Ref. 56-21-12, P. Block 401).

C. Close-Up

(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install equipment and furnishings, as required.
(3)Remove access platform.

PASSENGER/CREW DOOR WINDOW - DESCRIPTION AND OPERATION

1. General

A. The door window assemblies are identical in design and are interchangeable. The window frame is riveted to the door outer skin.

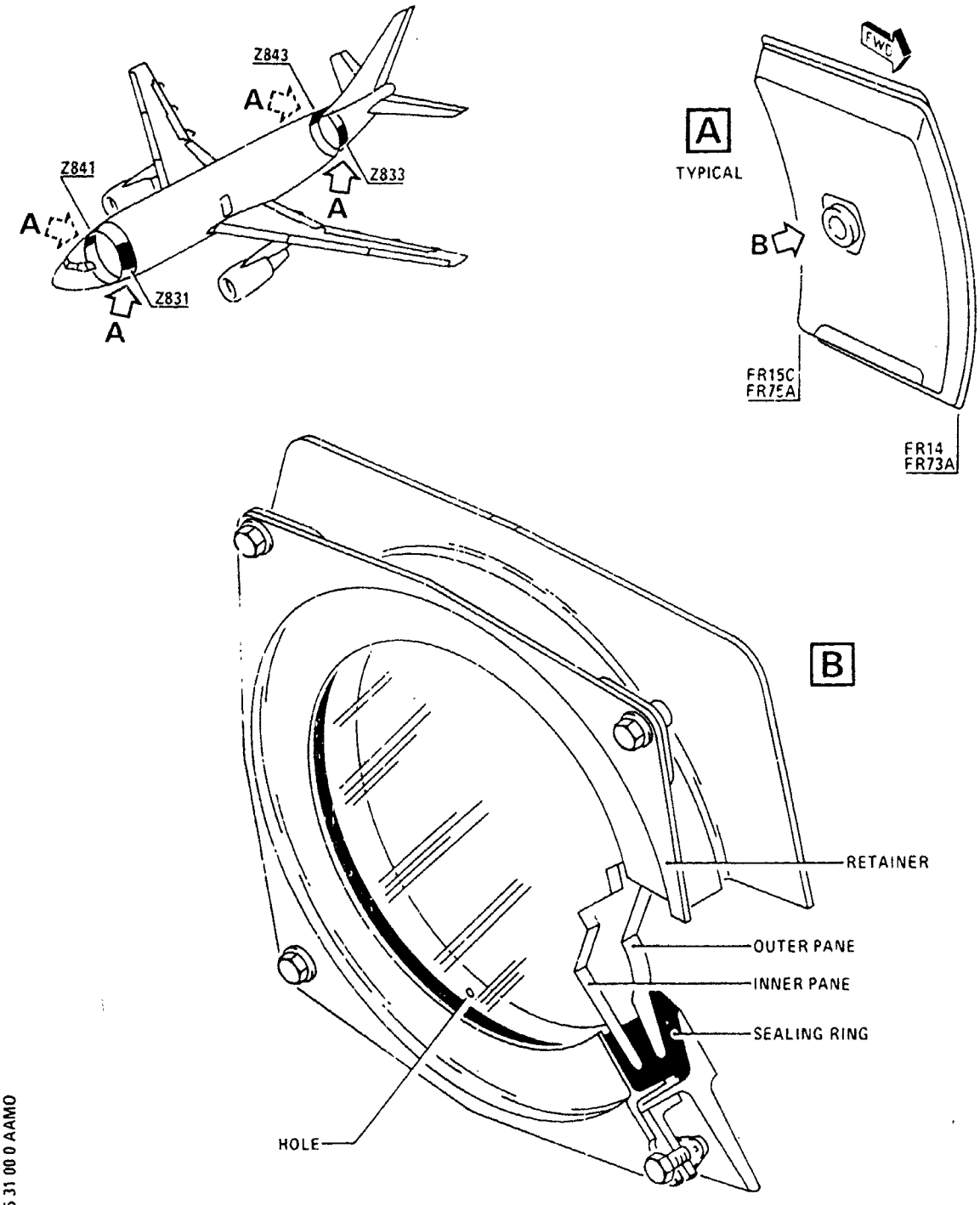
2. Description (Ref. Fig. 001)

A. The window assembly comprises an inner pane of stretched acrylic and an
R outer pane of colorless stretched acrylic
R retained by a sealing ring.

B. All components of the window assemblies are interchangeable.

C. A hole through the inner pane maintains cabin pressure within the window assembly.

D. The window assembly is positioned with the hole in the inner pane at the lowest point of the assembly and attached to the door window frame by a retainer secured by bolts.



Door Window Assembly
Figure 001

PASSENGER/CREW DOOR WINDOW - REMOVAL/INSTALLATION

WARNING : SPECIAL PRECAUTIONS MUST BE FOLLOWED BEFORE CARRYING OUT MAINTENANCE ON OR NEAR PASSENGER/CREW DOORS (REF. 52-10-00, P. BLOCK 301).
CAUTION : SPECIAL PRECAUTIONS MUST BE FOLLOWED DURING MAINTENANCE ON PASSENGER/CREW DOOR WINDOW (REF. 56-21-00, P. BLOCK 301).

1. Reason for the Job

A. Removal for cleaning inner surfaces of inner and outer panes

2. Equipment and Materials

	ITEM	DESIGNATION
	A.	Access Platform, 4.40 m (14.50 ft.)
R	B.	Torque Wrench up to 1.0 m.daN (90.0 lbf.in.)
	C.	Boiled Glove Cloth
	D.	Chamois Leather
	E.	Cord, 2.0 mm (0.08 in.) dia.
	F.	Liquid Soap
	G.	Sponge
	H. Material No. 05-012	Special Materials (Ref. 20-31-00)
	J. Material No. 06-002	Lubricants (Ref. 20-31-00)

Referenced Procedures

- 52-10-00, P. Block 301	Passenger/Crew Doors - Special Precautions
- 52-10-13, P. Block 401	FWD, AFT Door Lining and Insulation
- 56-21-00, P. Block 301	Windows - Special Precautions

3. Procedure

A. Job Set-Up
(1)Position access platform.
WARNING : SPECIAL PRECAUTIONS MUST BE FOLLOWED (REF. 52-10-00, P. BLOCK 301).
(2)Safety emergency escape slide, emergency operation cylinder and door warning system (Ref. 52-10-00, P. Block 301).
(3)Remove lining and insulation as required (Ref. 52-10-13, P. Block 401).

B. Removal (Ref. Fig. 401)
CAUTION : SPECIAL PRECAUTIONS MUST BE FOLLOWED (REF. 56-21-00, P. BLOCK 301).
(1)Remove bolts (1) and washers (2).
(2)Remove retainer (3).
(3)Remove window assembly (4) from window frame (5).

C. Disassembly (Ref. Fig. 402)
CAUTION : SPECIAL PRECAUTIONS MUST BE FOLLOWED (REF. 56-21-00, P. BLOCK 301).
(1)Remove inner pane (6) from sealing ring (7).
(2)Remove outer pane (8) from sealing ring (7).

D. Preparation for Installation (Ref. Fig. 402)
CAUTION : SPECIAL PRECAUTIONS MUST BE FOLLOWED (REF. 56-21-00, P. BLOCK 301).

** ON NEW PANES ONLY

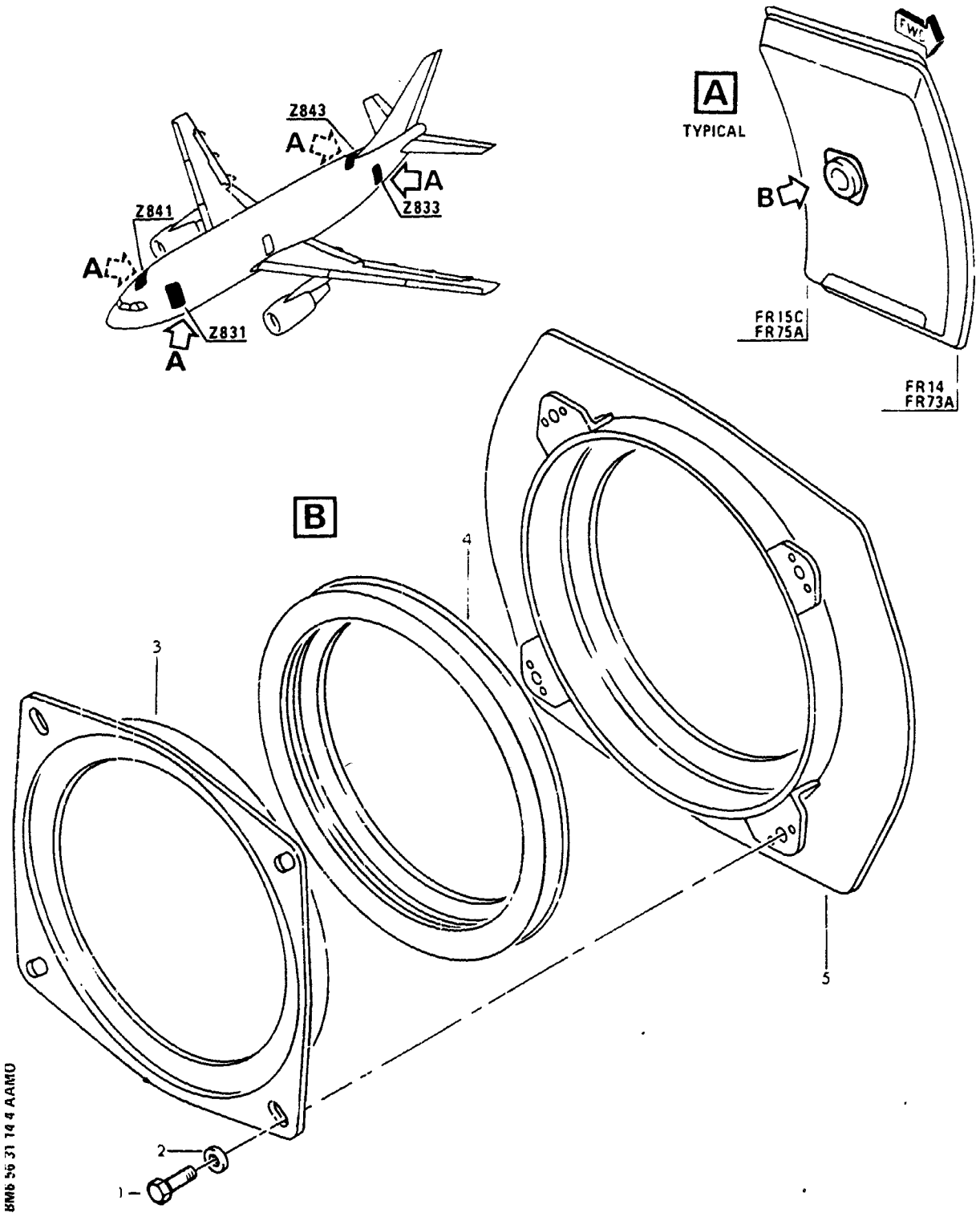
(1)Remove protective coating from inner face of outer pane (8) and both faces of inner pane (6).

** ON PANES FOR REINSTALLATION

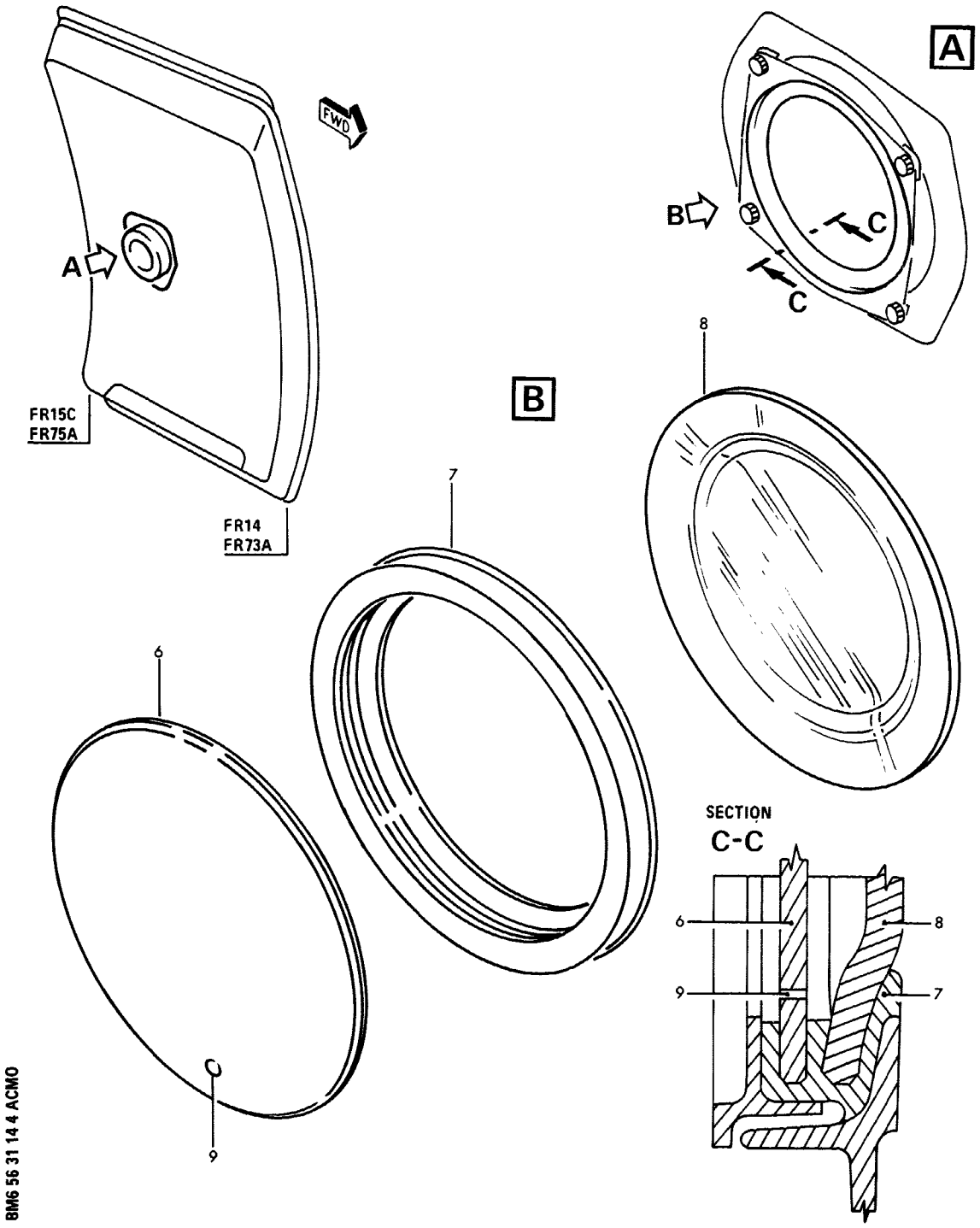
(1)Not applicable

** ON ALL PANES

(2)Clean panes (6, 8) by hand using liberal quantities of warm water. Make certain that no abrasive matter remains on panes (6, 8).
(3)Wash panes (6, 8) with mild soap solution, applied with boiled glove cloth, sponge or chamois leather.
(4)Rinse panes (6, 8) with liberal quantities of warm water and dry with clean, damp chamois leather.
(5)If further cleaning is required, proceed as follows:
(a)Apply plastic cleaner (Mat. No. 05-012) and clean panes (6, 8) using boiled glove cloth.
(b)Rinse panes (6, 8) with clean water and dry with clean, damp chamois leather.
(c)Make sure that hole (9) of inner pane (6) is not obstructed.
(6)Apply antistatic treatment.
(a)Mix seven parts plastic cleaner (Mat. No. 05-012) with sixty parts water by volume.
(b)Soak boiled glove cloth with antistatic solution and apply to inner surface of outer pane (8) and both surfaces of inner pane (6).
(c)Allow panes (6, 8) to dry, and polish with boiled glove cloth, maintaining a light pressure and using brisk straight strokes.
NOTE : Do not wet or mar surfaces of panes (6, 8) after treatment.



Window Assembly
Figure 401



Window
Figure 402

E. Assembly (Ref. Fig. 402)

CAUTION : SPECIAL PRECAUTIONS MUST BE FOLLOWED (REF. 56-21-00, P. BLOCK 301).

** ON NEW PANES ONLY

(1)Remove protective coating from edge of outer pane (8), where pane contacts sealing ring (7).

** ON PANES FOR REINSTALLATION

(1)Not applicable

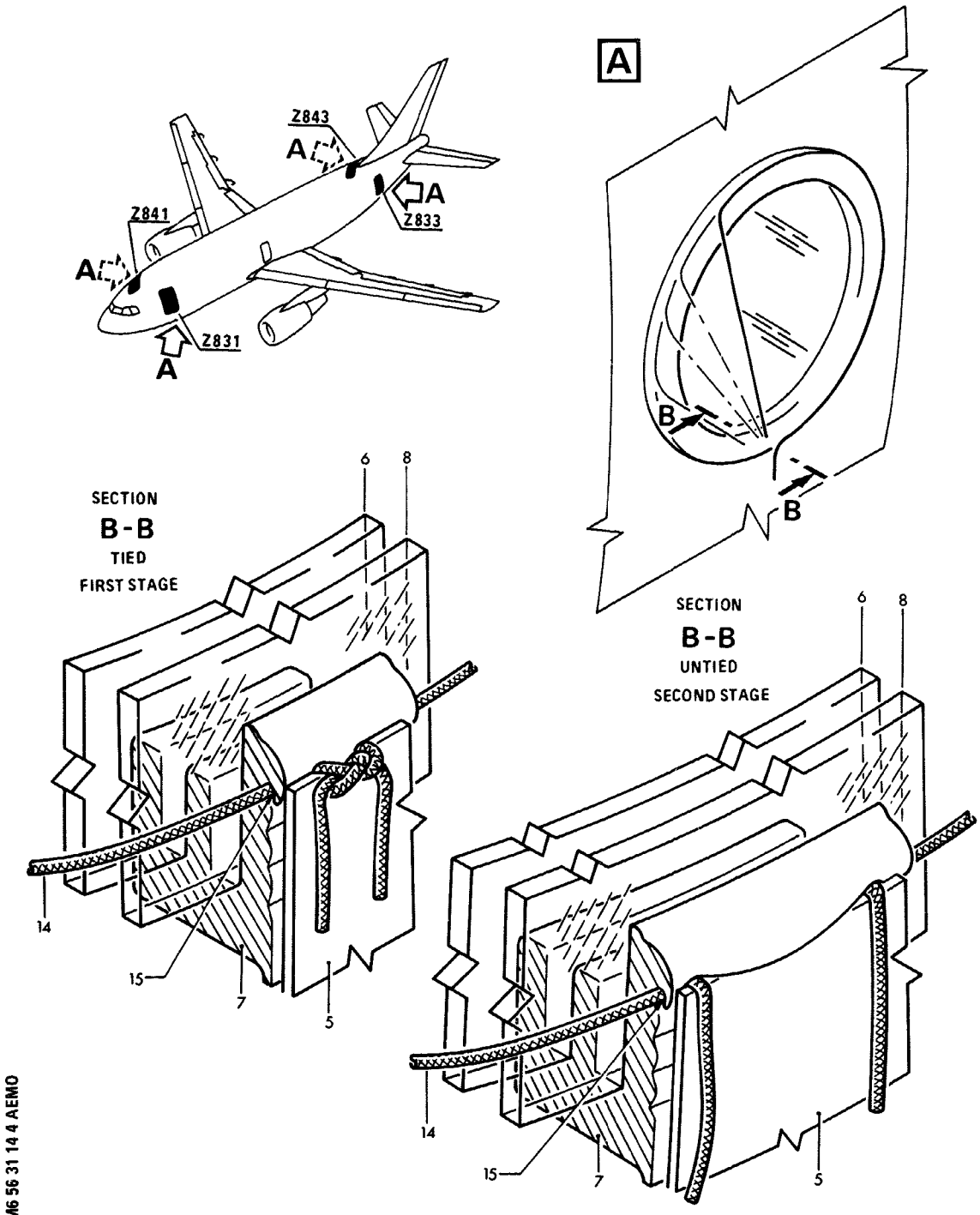
** ON ALL PANES

(2)Install outer pane (8) in sealing ring (7).
(3)Install inner pane (6) in sealing ring (7).

F. Installation (Ref. Fig. 401, 403)

CAUTION : SPECIAL PRECAUTIONS MUST BE FOLLOWED (REF. 56-21-00, P. BLOCK 301).

(1)Position 2.0 mm (0.08 in.) dia. cord (14) around groove (15) in sealing ring (7) and tie tightly with knot adjacent to hole (9) of inner pane (6).
(2)Apply lubricant (Mat. No. 06-002) to thread of bolts (1).
(3)Position window assembly (4) in window frame (5). Make sure that hole (9) of inner pane (6) is positioned at lowest point of window assembly (4) and that ends of cord (14) are not trapped between window assembly (4) and window frame (5).
(4)Position retainer (3), install washers (2) and bolts (1) but do not tighten.
(5)Check position of window assembly (4) in window frame (5). Window assembly (4) must be central in window frame (5), and outer bead of sealing ring (7) must project by same amount around whole window frame (5).



Installation of Window Seal
Figure 403

(6)Untie knot in cord (14) and pull LH end of cord (14) from groove (15) in sealing ring (7). Continue pulling cord (14) clockwise until completely removed and bead of sealing ring (7) is evenly seated on edge of window frame (5).

CAUTION : MAKE CERTAIN BEAD IS NOT TRAPPED.

R (7)TORQUE bolts (1), in a diagonal sequence, to between 0.4 and 0.5 m.daN
R (35.4 and 44.2 lbf.in.).

(8)Mark heads of bolts (1) and retainer (3) with red stripe.

** ON NEW PANES ONLY

(9)Remove protective coating from outer surface of outer pane (8).

** ON PANES FOR REINSTALLATION

(9)Not applicable

** ON ALL PANES

G. Close-Up

(1)Make sure that working area is clean and clear of tools and miscellaneous items of equipment.

(2)Install door lining and insulation (Ref. 52-10-13, P. Block 401).

WARNING : SPECIAL PRECAUTIONS MUST BE FOLLOWED (REF. 52-10-00, P. BLOCK 301).

(3)Arm emergency operation cylinder and activate door warning system (Ref. 52-10-00, P. Block 301).

(4)Remove access platform.

PASSENGER/CREW DOOR WINDOW - INSPECTION/CHECK

WARNING : SPECIAL PRECAUTIONS MUST BE FOLLOWED BEFORE CARRYING OUT MAINTENANCE ON OR NEAR PASSENGER/CREW DOOR (REF. 52-10-00, P. BLOCK 301).
CAUTION : REPLACE CRAZED OR DELAMINATED INNER PANES.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 4.4 m (14.50 ft.)
B.	Flashlight
C.	Magnifying Glass
D.	Transparent Graph Paper

Referenced Procedures

- 51-74-10, P. Block 801	Removal of Corrosion
- 51-75-10, P. Block 801	Repair of Paint Coatings
- 52-10-00, P. Block 301	Passenger/Crew Doors - Special Precautions
- 52-10-13, P. Block 401	FWD, AFT Door Lining and Insulation
- 56-31-14, P. Block 401	Passenger/Crew Door Window

2. Procedure

A. Job Set-Up
(1)Position access platform.
WARNING : SPECIAL PRECAUTIONS MUST BE FOLLOWED.
(2)Safety emergency escape slide, emergency operation cylinder and door warning system (Ref. 52-10-00, P. Block 301).
(3)Remove door lining and insulation as required (Ref. 52-10-13, P. Block 401).

B. Possible Types of Damage (Ref. Fig. 601, 602)
(1)Crazing: Multidirectional type of crazing.
(2)Fine scratch: Possiblity of crack formation.
(3)Deep scratch or surface crack: Without crazing.
(4)Fine scratch or surface crack: With crazing.
(5)Crack: Extending through complete material thickness.
(6)Crazing: Unidirectional type or crazing e.g. star, line or crater crazing.
(7)Bulging.

** ON STRETCHED ACRYLIC PANES ONLY

(8)Delamination: Slate like separation of material.
(9)Orange peel effect.
(10)Chipping.

** ON ALL PANES

NOTE: All defects clearly visible under normal daylight conditions. Any combination and/or overlapping of damage is possible.

C. Inspection Method (Ref. Fig. 603)

NOTE: Inspection of panes may be carried out with window assembly installed or removed.

(1)Measure length of damage as follows:

(a)Place graph paper on windowpane to be inspected.

NOTE: Graph paper lines should be approx. 0.1 mm (0.004 in.) thick.

(b)Position light source at 90- to opposite surface of windowpane.

(c)Switch on light source.

(d)Length of damage appears as dark line on graph paper. Mark extremities of line and measure distance between points.

(2)Measure depth of damage as follows:

(a)Place graph paper on windowpane to be inspected.

NOTE: Graph paper lines should be approx. 0.1 mm (0.004 in.) thick.

(b)Position light source at 45- to opposite surface of windowpane and 90- to longitudinal axis of damage.

(c)Switch on light source.

(d)Depth of damage appears as dark area on graph paper. Mark outline of damage on graph paper and measure distance at maximum depth.

** ON CAST ACRYLIC PANES ONLY

(e)Multiply dimension obtained by a factor of 1.4 to obtain true depth.

** ON STRETCHED ACRYLIC PANES ONLY

(e)Multiply dimension obtained by a factor of 1.6 to obtain true depth.

** ON ALL PANES

(f)Should depth of damage exceed stated limits, windowpane must be replaced.

D. Inspection of Windowpanes (Ref. Fig. 604, 605, 602)

NOTE : Windowpanes must be inspected from different angles to detect defects using flashlight and magnifying glass.

(1)Cracks

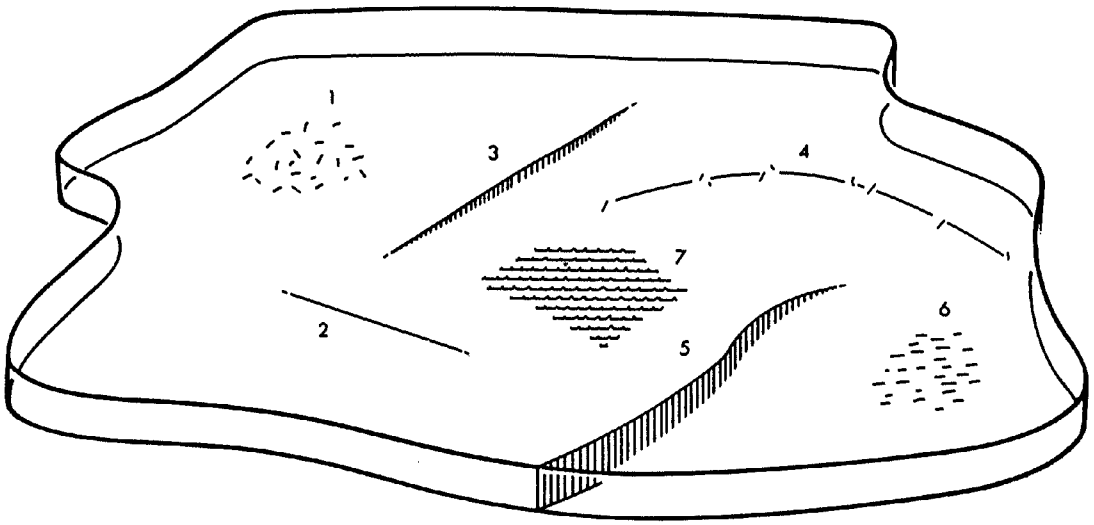
(a)Examine windowpanes for cracks. Cracked windowpanes must be replaced (Ref. 56-31-14, P. Block 401).

(2)Crazing

CAUTION : CRAZED INNER PANES MUST BE REPLACED.

(a)Inspect inner and outer panes for crazing.

(b)Should crazing exceed stated limit, windowpanes must be replaced (Ref. 56-31-14, P. Block 401).

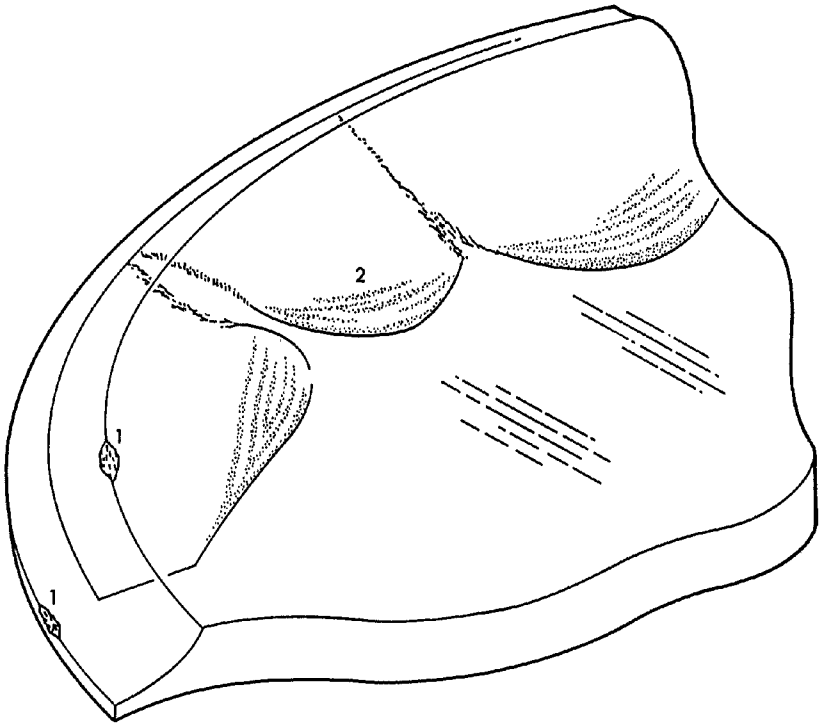


1	CRAZING: MULTIDIRECTIONAL TYPE OF CRAZING.
2	FINE SCRATCH: POSSIBILITY OF CRACK FORMATION
3	DEEP SCRATCH OR SURFACE CRACK: WITHOUT CRAZING.
4	FINE SCRATCH OR SURFACE CRACK: WITH CRAZING.
5	CRACK: EXTENDING THROUGH COMPLETE MATERIAL THICKNESS (SHOWN DECREASING TO ZERO AT END OF CRACK).
6	CRAZING: UNIDIRECTIONAL TYPE OF CRAZING E.G. STAR, LINE OR CRATER.
7	ORANGE PEEL EFFECT: SURFACE DAMAGE

NOTE: ALL DEFECTS CLEARLY VISIBLE UNDER NORMAL DAYLIGHT CONDITIONS.
ANY COMBINATION AND/OR OVERLAPPING OF DAMAGE IS POSSIBLE.

BM6 56 31 14 6 AGMO 00

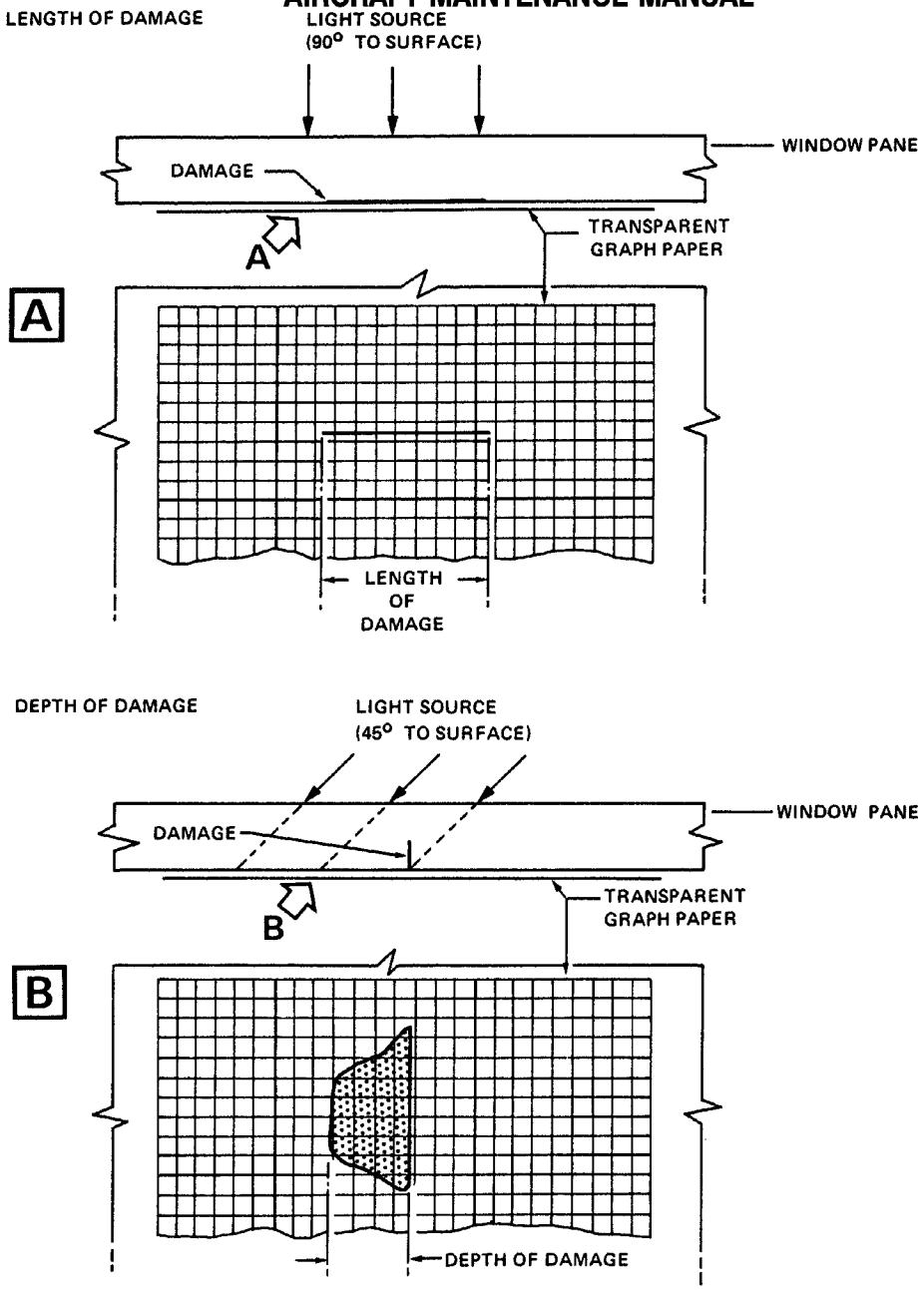
Possible Types of Damage
Figure 601



1	CHIPPING: EDGE DAMAGE
2	DELAMINATION: PARALLEL TO SURFACE
	NOTE: ALL DEFECTS CLEARLY VISIBLE UNDER NORMAL DAYLIGHT CONDITIONS. ANY COMBINATION AND/OR OVERLAPPING OF DAMAGE IS POSSIBLE.

BM6 56 31 14 6 AJMO 00

Possible Types of Damage
Figure 602



NOTE: ON CAST ACRYLIC PANES
TRUE DEPTH = DEPTH x 1.4

ON STRETCHED ACRYLIC PANES
TRUE DEPTH = DEPTH x 1.6

BM6 56 31 14 6 AE M0-16

Inspection Method
Figure 603

		OUTER PANE MEASUREMENTS	INNER PANE MEASUREMENTS
DESIGN THICKNESS WITH TOLERANCE		6±0.6 mm (0.24±0.024 in.)	$4^{+0.4}_{-0.6}$ mm ($0.16^{+0.016}_{-0.024}$ in.)
MINIMUM THICKNESS AFTER REWORK		REWORK NOT RECOMMENDED	3.0 mm (0.12 in.)
SCRATCHES	MAXIMUM DEPTH OF SCRATCH	UP TO 0.15 mm (0.006 in.)	UP TO 0.15 mm (0.006 in.)
CRAZING	MAXIMUM DEPTH OF PENETRATION	0.4 mm (0.016 in.)	NOT PERMITTED
	MAXIMUM CUMULATIVE AREA	FULL SURFACE	
BULGING	MAXIMUM HEIGHT OF BULGE	4.0 mm (0.157 in.)	
CRAZING WITH BULGING	MAXIMUM CUMULATIVE AREA WITH MAXIMUM HEIGHT OF BULGE	FULL SURFACE	

NOTE: CUMULATIVE AREA = AREA IN WHICH ALL CRAZING IS CLOSER TOGETHER THAN 10.0 mm (0.394 in.)

BM 6 56 31 14 6 AA M 0–18

Windowpane Damage Criteria
(Cast Acrylic Outer Pane)
Figure 604

		OUTER PANE MEASUREMENTS	INNER PANE MEASUREMENTS
DESIGN THICKNESS WITH TOLERANCE		6.0±0.6 mm (0.24±0.024 in.)	$4.0^{+0.4}_{-0.6}$ mm ($0.16^{+0.016}_{-0.024}$ in.)
MINIMUM THICKNESS AFTER REWORK		4.7 mm (0.185 in.)	3.0 mm (0.12 in.)
SCRATCHES	MAXIMUM DEPTH OF SCRATCH	UP TO 0.15 mm (0.006 in.)	UP TO 0.15 mm (0.006 in.)
CRAZING	MAXIMUM DEPTH OF PENETRATION	0.4 mm (0.016 in.)	NOT PERMITTED
	MAXIMUM CUMULATIVE AREA	FULL SURFACE SEE(1)	
BULGING	MAXIMUM HEIGHT OF BULGE	3.0 mm (0.118 in.)	
CRAZING WITH BULGING	MAXIMUM CUMULATIVE AREA WITH MAXIMUM HEIGHT OF BULGE	FULL SURFACE	
DELAMINATION		SEE (2)	
ORANGE PEEL EFFECT		NOT PERMITTED	
CHIPPING		NOT PERMITTED	

(1) NOTE: CUMULATIVE AREA = AREA IN WHICH ALL CRAZING IS CLOSER TOGETHER THAN 10.0 mm (0.394 in.)

(2) CAUTION: PANES WITH DELAMINATION EXCEEDING 'HOLDING AREA' (VISIBLE IN SITU) MUST BE REPLACED

BM6 56 31 14 6 ACMO 00

Windowpane Damage Criteria
(Stretched Acrylic Outer Pane)
Figure 605

(3)Scratches
(a)Inspect inner and outer windowpanes for scratches.
(b)Should scratches exceed stated limit, windowpanes must be replaced (Ref. 56-31-14, P. Block 401).
(4)Bulging
(a)Check outer windowpanes for bulging.
(b)Should height of bulge exceed stated limit, outer windowpane must be replaced (Ref. 56-31-14, P. Block 401).
(c)Make certain that hole in inner windowpane is not obstructed.
(5)Delamination (Ref. Fig. 602)
CAUTION : DELAMINATED INNER PANES MUST BE REPLACED.

** ON STRETCHED ACRYLIC OUTER PANES

CAUTION : DELAMINATED OUTER PANES EXCEEDING STATED LIMIT MUST BE REPLACED (Ref. Fig. 605).
(a)Inspect windows for signs of slate-like separation of material.
** ON STRETCHED ACRYLIC PANES ONLY
(6)Orange peel effect (Ref. Fig. 605, 601)
CAUTION : INNER AND OUTER PANES WITH ORANGE PEEL EFFECT MUST BE REPLACED.
(a)Inspect inner and outer panes for orange peel effect.
(7)Chipping (Ref. Fig. 602)
CAUTION : INNER AND OUTER PANES WITH CHIPPING MUST BE REPLACED.
(a)Inspect inner and outer panes for chipping.
(8)Inspection of Window Assembly (Installed)
(a)Make certain by means of telltale marks, that all nuts on window retainer are tight. Tighten as required (Ref. 56-31-14, P. Block 401).
(b)Inspect sealant around window frame nuts for condition and security of attachment. Damaged sealant must be replaced (Ref. 56-31-14, P. Block 401).
(9)Inspection of Window Assembly (Removed)
(a)Remove window assembly (Ref. 56-31-14, P. Block 401).
(b)Examine window seal for damage and material deterioration. Damaged seal must be replaced (Ref. 56-31-14, P. Block 401).
(c)Inspect retainer for corrosion and satisfactory paint coatings.
1 Corrosion damage of window retainer, to a depth of 0.2 mm (0.008 in.) must be repaired. Should stated limit be exceeded, retainer must be replaced (Ref. 56-31-14, P. Block 401).
2 Corrosion in holes of window retainer must be repaired, but diameter of holes must not exceed 8.0 mm (0.32 in.). Should stated limit be exceeded, retainer must be replaced (Ref. 56-31-13, P. Block 401).
3 For the removal of corrosion refer to 51-74-10, P. Block 801.
4 For the repair of paint coatings refer to 51-75-10, P. Block 801.
(d)Install window assembly (Ref. 56-31-14, P. Block 401).

E. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install door lining and insulation (Ref. 52-10-13, P. Block 401).
(3)Remove access platform.

PASSENGER/CREW DOOR WINDOW - CLEANING

WARNING : POSITION WARNING NOTICE ON INSIDE OF DOOR AND MAKE CERTAIN THAT DOOR IS CLOSED.

CAUTION : RUBBING SURFACE OF PANE WITH A DRY CLOTH CAUSES SCRATCHES AND BUILDS UP AN ELECTROSTATIC CHARGE WHICH ATTRACTS DUST PARTICLES. THE USE OF INCORRECT CLEANING METHODS MAY LEAD TO FAILURE OF THE WINDOW. USE SPECIFIED CLEANING MATERIALS ONLY.

1. Reason for the Job

A. Cleaning outer surface of outer pane.

NOTE : For cleaning inner surface of outer pane, both surfaces of inner pane, and application of antistatic solution to panes, refer to 56-31-14, P. Block 401.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 4.4 m (14.50 ft.)
B.	Boiled Glove Cloth
C.	Chamois Leather
D.	Soap
E.	Sponge
F.	Warning Notice
G. Material No. 05-012	Special Materials (Ref. 20-31-00)
Referenced Procedure	
- 56-31-14, P. Block 401	Passenger/Crew Door Window

3. Procedure

A. Job Set-Up
(1)Position access platform.
WARNING : MAKE CERTAIN THAT DOOR IS CLOSED.
(2)Position warning notice on inside of door.

B. Cleaning
CAUTION : DO NOT RUB SURFACES WITH DRY CLOTH. USE SPECIFIED CLEANING MATERIALS ONLY.
(1)Clean pane by hand, using liberal quantities of warm water. Make certain that no abrasive matter remains on pane.
(2)Wash pane with mild soap solution applied with boiled glove cloth, sponge or chamois leather.
(3)Rinse pane with liberal quantities of warm water, and dry with a clean, damp chamois leather.
(4)If further cleaning is required, proceed as follows:
(a)Apply plastic cleaner (Mat. No. 05-012), and clean pane, using boiled glove cloth.
(b)Rinse pane with clean water, and dry with clean, damp chamois leather.

C. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Remove warning notice.
(3)Remove access platform.

VIEWING WINDOWS - DESCRIPTION AND OPERATION

1. General

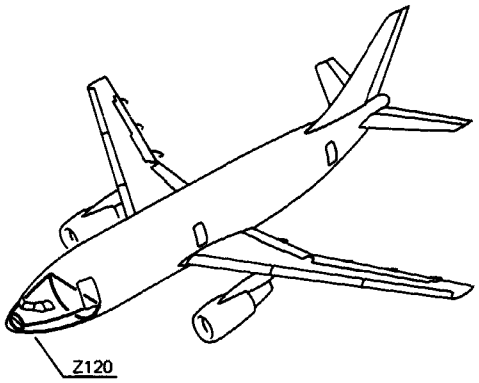
A. The nose landing gear viewing window, located in the LH side of the nose landing gear bay between STA1184(FR14) and STA1212(FR15), enables a visual check to be made of the nose landing gear mechanical locking indicator from within the avionics compartment. An aft window allows a torch to be shone directly onto the locking indicator while inspecting through the forward window.

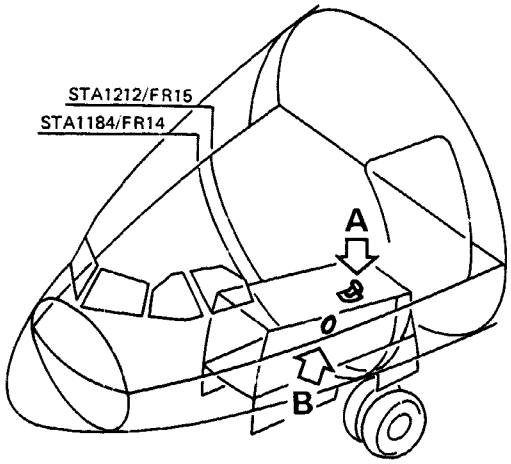
B. On each passenger/crew door, a small window is installed in the upper surface of the support arm panel. The window allows the pressure in the door damper and emergency operation cylinder to be read without opening the passenger/crew door.

2. Description

A. Nose Landing Gear Viewing Window
(Ref. Fig. 001)
(1) The forward viewing window assembly comprises a mounting riveted to the structure, a packing seal, window and ring nut. The ring nut is secured by a spring locking assembly which engages with slots on the ring nut.
(2) The aft mechanical indicator lighting window assembly comprises an angled mounting, riveted to the reinforcing plate on the nose bay structure, a packing seal, window and ring nut. The ring nut is locked by a spring, attached to lugs on the mounting, which engages with slots on the ring nut.

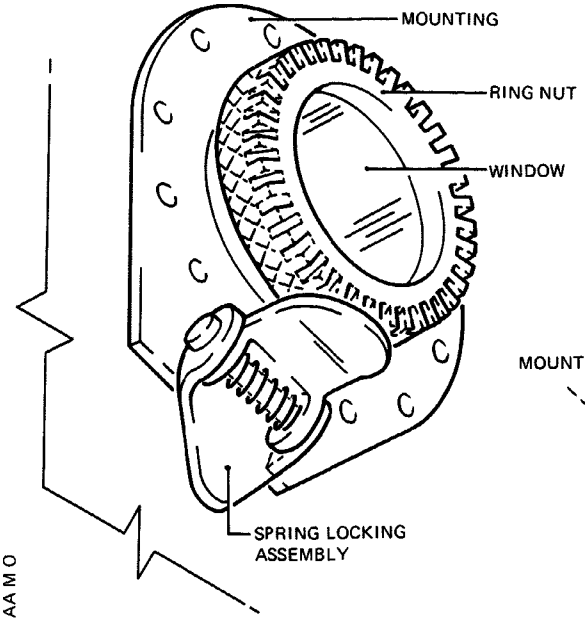
B. Door Damper and Emergency Operation Cylinder Viewing Window
(1) Each passenger/crew door has a small window installed in the upper surface of the support arm panel.

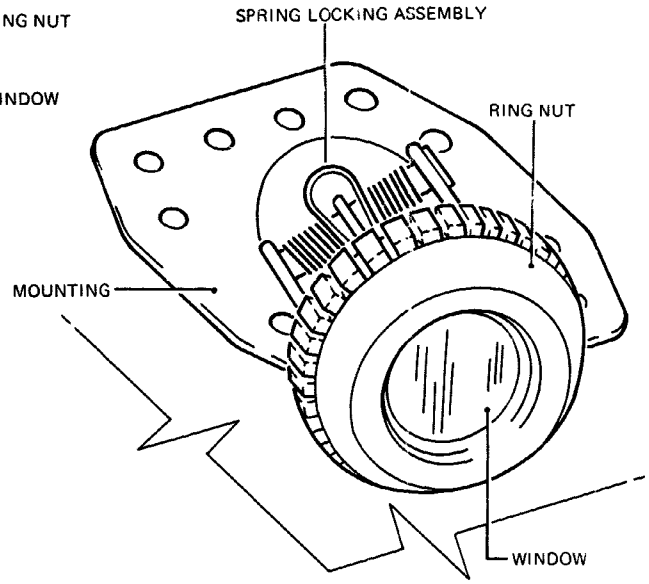




B TYPICAL VIEWING WINDOW

A TYPICAL MECHANICAL INDICATOR LIGHTING WINDOW





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Nose Landing Gear Viewing Window
Figure 001

NOSE LANDING GEAR VIEWING WINDOW - REMOVAL/INSTALLATION

NOTE : Two windows serve for checking that the nose gear is downlocked :
a viewing window and a lighting window.
The removal/installation of both windows is covered in this topic.

1. Viewing Window

A. Equipment and Materials

ITEM	DESIGNATION
(1)	O-Ring

B. Procedure (Ref. Fig. 401)

(1)Job Set-up
- (a)Open access door 121 BL.
- (b)Gain access to nose landing gear well LH side, between frames 14 and 15 : vertical panel.

(2)Removal
- (a)Disengage spring latch (1)
- (b)Unscrew and remove slotted nut (4)
- (c)Remove glass element (3)
- (d)Remove O-ring (2)

(3)Preparation of Replacement Component.
- (a)Check O-ring for correct condition
- (b)Check glass element for correct condition (no scratches)

(4)Installation
- (a)Insert O-ring (2) in its groove.
- (b)Engage glass element (3) into slotted nut (4) and hand tighten the latter while disengaging spring latch (1)
- (c)Continue to hand tighten slotted nut until spring latch engages in a slot of the nut.

(5)Close-up.
- (a)If necessary, clean glass element with a dry, lint-free cloth
- (b)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
- (c)Close access door 121BL

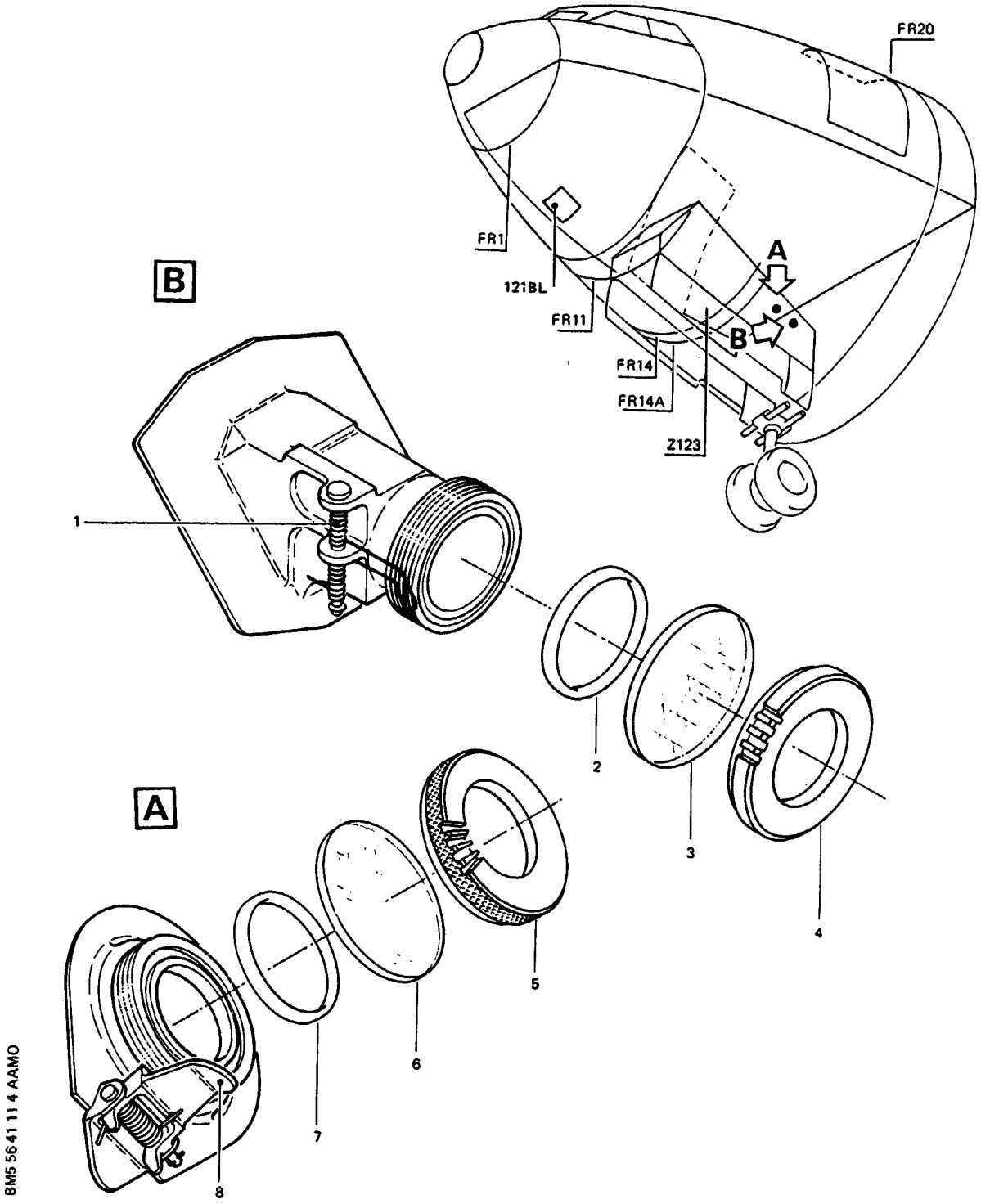
2. Mechanical Indicator Lighting Window

A. Equipment and Materials

ITEM	DESIGNATION
(1)	O-Ring

B. Procedure (Ref. Fig. 401)

(1)Job set-up
- (a)Open access door 121 BL.



Viewing Window, Nose Landing Gear
Figure 401

(b)Gain access to nose landing gear well LH side between frames 14 and 15 :
vertical panel.

(2)Removal
(a)Disengage spring latch (8)
(b)Unscrew and remove slotted nut (5).
(c)Remove glass element (6)
(d)Remove O-ring (7)

(3)Preparation of Replacement Component
(a)Check O-ring for correct condition
(b)Check glass element for correct condition (no scratches)

(4)Installation
(a)Insert O-ring (7) in its groove.
(b)Engage glass element (6) into slotted nut (5) and hand tighten the latter while disengaging spring latch (8)
(c)Continue to hand tighten slotted nut (5) until spring latch engages in a slot of the nut.

(5)Close-up
(a)If necessary, clean window with a dry, lint-free cloth.
(b)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(c)Close access door 121BL.